



# Avid ISIS

## ReadMe Version 4.7.11

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### Important Information

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

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

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

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



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

### Revision History

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Date Revised	Release	Changes Made
3/28/2017	4.7.11 Update	See “ <a href="#">Qualified and Approved ISIS Switches</a> ” on page 24.
6/28/2016	4.7.11	Added “ <a href="#">New In Avid ISIS v4.7.11</a> ” on page 6
5/5/2016	v4.7.10	Added “ <a href="#">New in Avid ISIS v4.7.10</a> ” on page 6
4/19/2016	v4.7.9	Added “ <a href="#">New in Avid ISIS v4.7.9</a> ” on page 6
1/26/2016	v4.7.8 (Update)	Modified “ <a href="#">New in Avid ISIS v4.7.8</a> ” on page 7
1/18/2016	v4.7.8	Added “ <a href="#">New in Avid ISIS v4.7.8</a> ” on page 7, modified “ <a href="#">Recommended Releases</a> ” on page 17

<b>Date Revised</b>	<b>Release</b>	<b>Changes Made</b>
11/11/2015	v4.7.7	Added <a href="#">“New in Avid ISIS v4.7.7”</a> on page 7
09/28/2015	v4.7.6	Added <a href="#">“New in Avid ISIS v4.7.6”</a> on page 8, and <a href="#">“Recommended Releases”</a> on page 17
6/26/2015	v4.7.5	Updated for 4.7.5 release, and added <a href="#">“STIGs Qualification”</a> on page 25
02/06/2015	v4.7.4	Added <a href="#">“New in Avid ISIS v4.7.4”</a> on page 10; updated <a href="#">“Supported Upgrade Paths”</a> on page 17 and <a href="#">“Hardware and Software Requirements”</a> on page 19 and <a href="#">“Supported Ethernet Cards and Drivers”</a> on page 22
10/08/2014	v4.7.3	Clarified list of fixes in <a href="#">“New in Avid ISIS v4.7.3”</a> on page 12, and note in <a href="#">“System Director and Client Version Compatibility”</a> on page 19
10/03/2014	v4.7.3	ISIS v4.7.3 is NOT recommended for ISIS   5500 & ISIS 5000 connected via 4x1 GbE links to a network switch.
10/03/2014	v4.7.3	Added issue with 10 Gb/Zone 2 clients and ISIS   7500 systems to <a href="#">“Client Issues”</a> on page 27
9/25/2014	v4.7.3	Added <a href="#">“New in Avid ISIS v4.7.3”</a> on page 12, and <a href="#">“Enabling Flash Player on Windows Server 2012”</a> on page 30. Revised <a href="#">“Supported Upgrade Paths”</a> on page 17 and <a href="#">“System Director and Client Version Compatibility”</a> on page 19
9/16/2014	v4.7.2	Modified ISIS   5500 Upgrade Path information; see <a href="#">“Supported Upgrade Paths”</a> on page 17
9/5/2014	v4.7.2	Revised <a href="#">“New in Avid ISIS v4.7.2”</a> on page 14
8/30/2014	v4.7.2	Corrected 10Gb client support for Adobe Premiere; see <a href="#">“Adobe Premiere Pro Software Approved”</a> on page 31
8/28/2014	v4.7.2	Added <a href="#">“New in Avid ISIS v4.7.2”</a> on page 14
08/19/2014	v4.7	Update to <a href="#">“Hardware and Software Requirements”</a> on page 19
07/14/2014	v4.7	Added 2x10Gb Myricom card in <a href="#">“Dual 10 Gb Connection Support”</a> on page 16, and ISIS 5000 Upgrade Path information from v4.0/4.0.1 in <a href="#">“Supported Upgrade Paths”</a> on page 17
06/12/2014	v4.7	Added <a href="#">“New in Avid ISIS v4.7”</a> on page 15, <a href="#">“Supported Upgrade Paths”</a> on page 17, <a href="#">“System Configuration Limits”</a> on page 19, and <a href="#">“Applying the Microsoft HotFix KB2685007 on Windows 7”</a> on page 33

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## Accessing the Online Documentation

The Avid ISIS documentation is accessible in PDF format from the [Knowledge Base](#) on the support site.

## Avid Training Services

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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).

## 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 is provided in the ReadMe file available online.  
**You should always check online for the most up-to-date documentation.** 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). 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.

## New In Avid ISIS v4.7.11

ISIS v4.7.11 supports:

- ISIS | 7500 & ISIS 7000—All configurations
- ISIS | 2500 & ISIS 2000—All configurations
- ISIS | 5500 & ISIS 5000—All configurations

### Improvement in TCP Transfer Handling

This release fixes a resource contention issue resulting from the change in data transfers from UDP to TCP between the v4.6.x release stream and the v4.7.x release stream. The contention arises when a client performs a large number of small, discontinuous updates to a file in parallel.

## New in Avid ISIS v4.7.10

### Hang in Client Driver on AMS System Issue

This release fixes an issue resulting in a hang in the Client driver on AMS systems.

### Media Composer Drops Frames During Playback When Using DNx220X or DNx175X

This release fixes a problem observed in the ISIS log every 20 seconds. As the Client Manager lists the workspaces for connected servers, it must reconnect to servers that have not been in use. While reconnecting, the filesystem lock is held which holds off other activity - in this case PreReads.

## New in Avid ISIS v4.7.9

ISIS v4.7.9 supports:

- ISIS | 7500 & ISIS 7000—All configurations
- ISIS | 2500 & ISIS 2000—All configurations
- ISIS | 5500 & ISIS 5000—All configurations

### Media Composer Bins and Database Files Issue

This release fixes an issue discovered on some ISIS | 7500 systems after an upgrade to v4.7.8 from v4.0.4. ISIS clients running OS X 10.10 using Media Composer 8.4.1 and 8.5 had trouble saving bins and reading, writing, and deleting Media Composer database files. These problems resulted in “resource busy” errors on the editing clients.

### Network Degraded Errors on ISIS 2500 and ISIS 2000 Systems

On ISIS 2500 and ISIS 2000 systems, the Storage Manager would sometimes hang, causing workflows to stop. “Network degraded” errors were not being reported. The previous workaround was to reboot the Storage Manager.

### Snapshot Creation on ISIS 7500 and ISIS 7000 Systems

Fixed a timeout issue when creating system snapshots through the Log Aggregation Tool or through the ISIS Snapshots link in the Management Console on systems with failover System Directors.

### Black Magic/DaVinci Resolve Workflow

Fixed an issue where some workflows of DaVinci resolve would crash on ISIS storage systems.

### Support for Windows 10 on Clients

This release supports using Microsoft Windows 10 on clients systems accessing ISIS systems. The v4.7.9 kit includes a new driver version for Intel PRO/1000 NICs in Windows 10 systems, in the following location:

```
\Drivers\ISIS Client\Intel_Pro1000\Intel_20.4.1_Win_64.exe
```



*For Intel PRO/1000 PT NICs, use the driver available from Microsoft. Run the Windows Update utility.*

## New in Avid ISIS v4.7.8

ISIS v4.7.8 supports:

- ISIS | 7500 & ISIS 7000—All configurations
- ISIS | 2500 & ISIS 2000—All configurations
- ISIS | 5500 & ISIS 5000—All configurations

### Support for Smart Cards

This release supports the use of smart cards in environments that require an extra layer of security in addition to user names and passwords. Previously, in environments using smart cards, when users tried to access a Workspace using UNC, the client system repeatedly asked for but did not accept the user's credentials.

### Better Reporting of Insufficient NIC Speed for System Director Failover

In ISIS environments with redundant or failover System Directors, if the failover NIC on the active System Director negotiated a speed less than 1Gb, the NIC speed was logged in the Log Viewer but not marked as a problem. Now, if a failover NIC negotiates a speed less than 1Gb, it is flagged in the Control Panel with the message “Check event logs.”

## New in Avid ISIS v4.7.7

ISIS v4.7.7 supports:

- ISIS | 7500 & ISIS 7000—All configurations
- ISIS | 2500 & ISIS 2000—All configurations
- ISIS | 5500 & ISIS 5000—All configurations

### Support for OS X 10.11 “El Capitan” Clients

This release supports running OS X “El Capitan” 10.11 as an ISIS client. In addition, this release includes the Myricom v1.3.5 driver, which enables 10 Gb connections to OS X 10.11. Install the driver named `Myri10GE-1.3.5avid-1500-macosx10.9_10.10_10.11.dmg` from the `Drivers/ISIS Client/Myricom` folder in the Avid ISIS software kit.

## Support for ATTO ThunderLink™ 10 GbE Adapters for Mac

This release supports using any of the following ATTO ThunderLink adapters for Mac clients:

- TLNT-2102-D01 (10GBaseT) — Provides two 10 GbE connections
- TLNS-2102-D01 (Optical SFP+) — Provides two 10 GbE connections
- TLNS-2101-D00 — Provides one 10 GbE connection

In addition, this release includes the ATTO v2.0.6 driver, which enables 10 Gb connections to OS X.

Install the driver named `osx_drv_tlnc_206.dmg` from the `Drivers/ISIS Client/ATTO` folder in the Avid ISIS software kit. Use all the default values and settings.

## New in Avid ISIS v4.7.6

ISIS v4.7.6 supports:

- ISIS | 7500 & ISIS 7000—All configurations
- ISIS | 2500 & ISIS 2000—All configurations
- ISIS | 5500 & ISIS 5000—All configurations

### Fixed or Added in This Release

- On ISIS 7500 and ISIS 7000 systems, after stopping the System Directors when configuring System Director failover, if you closed the Validate Send or Validate Receive dialog box, you could not restart the standby System Director due to a port use conflict.
- Incorrect error message was displayed when validating Send and Receive operations between failover or redundant System Directors.
- Clients running Interplay or MediaCentral UX were not receiving timely notifications of file operations from the ISIS system, causing the Media Indexer to falsely report media offline errors to the clients requesting that media.
- On Linux clients certain I/O patterns, such as those seen when using certain tape archive applications, could cause the Linux client service to crash. Clients would experience the crash as all their Workspaces being unmounted.
- On Linux clients a spurious file named `1` was being created in the root directory when the ISIS client service, `avidfos`, was started. This file is harmless. The fix no longer creates the file named `1`, but does not remove any existing such file. After upgrading from a previous version, you can manually delete the file.
- On Linux clients frequent (every two seconds or less) automation-issued commands to reload the client's Registry configuration, which may be seen under certain operating conditions with MediaCentral, sometimes caused the Linux client service to crash. Clients would experience the crash as all their Workspaces being unmounted.
- In the Client Manager, established Windows shares (connections to Workspaces) gradually became inaccessible.
- On clients running Microsoft Windows 8.1, delayed write errors occurred when copying files to an ISIS Workspace.
- In some cases, when a user closed the Client Manager on client systems running OS X Yosemite (10.10) and Mavericks (10.9), they could not reopen/restart the Client Manager.
- Fixed a file write issue on Mac OS X clients.



- After installing the Myricom driver (Myricom\_1.1.14\_win\_64) and rebooting the client system, the Myricom network adapter was disabled.
- In the Management Console Bandwidth tool, client bandwidth was sometimes displayed at twice its real value.
- When running a Benchmark Utility test, the Utility showed the bandwidth value dropping to zero within the first minute of the test, but the Management Console showed no change in the bandwidth.
- Updated the Avid ISIS 5500 and Avid ISIS 7500 Setup Guides.

In both guides, step 10 in the procedure “Reinstalling the Windows Storage Server 2008 R2 Operating System” used to say “Select the Advanced Tab > IPMI Configuration...” and has been corrected to say “Select the Advanced tab > APM Configuration...”

## New in Avid ISIS v4.7.5

ISIS v4.7.5 supports:

- ISIS | 7500 & ISIS 7000—All configurations
- ISIS | 2500 & ISIS 2000—All configurations
- ISIS | 5500 & ISIS 5000—All configurations

### Fixed or Added in This Release

- Fixed an issue where the System Director would assert if a Storage Manager reported that it had more free bytes than available bytes. The System Director no longer asserts; instead, a message is logged that the Storage Manager in the specified chassis should be rebooted. Avid recommends dumping the logs from that Storage Manager before rebooting, if possible.
- With the ISIS v4.7.5 release, you can store Final Cut Pro X 10.2.1 libraries on ISIS | 7500 or ISIS | 5500 Workspaces.
- Fixed an issue on ISIS 7500 and ISIS 7000 systems where the Logging tab in the Agent did not display messages for the log type, source, and data for an ISS. Messages created after you upgrade to ISIS v4.7.5 will display that information, but older messages will not.
- Fixed an issue on ISIS 7500 and ISIS 7000 systems that was introduced with ISIS v4.7.0, as a result of moving the Heartbeat Timeout feature to the Advanced tab on the Switch Blade Agent page. If anything changed on the Configuration > Basic page, the Heartbeat enable flag could become disabled inadvertently.



**After changing anything in the Switch Blade Agent, check the Heartbeat Timeout feature on the Advanced tab to make sure it is still enabled. Avid strongly recommends checking all your ISIS 7500 and ISIS 7000 systems running v4.7.0 through v4.7.4 to make the Heartbeat Timeout feature is enabled.**

- Added instrumentation to collect more information on ISIS 7500 - 7000 and ISIS 2500 - 2000 systems when a network link interface transitions to an UNKNOWN state. The ISIS now logs important information if and when a request for network interface status fails.
- Related to the above, changed the behavior of ISIS 7500 - 7000 and ISIS 2500 - 2000 systems so that if the current network interface status cannot be determined (status UNKNOWN), the ISIS no longer changes the current interface state. This avoids an erroneous “Network Degraded” state.
- Improved the behavior of all ISIS systems that support failover or redundant System Directors, related to a change in how the Windows OS handled detection of possible duplicate IP addresses in a local network, which after failover caused the new active System Director to be unreachable using the virtual System Director name or IP address.

- Added instrumentation to collect more information related to kernel panics on the ISS and IXS switches on ISIS 7500 and ISIS 7000 systems.
- Corrected the way the Redistribution Monitor reports time remaining for a system that has more than 20 workspaces.
- Fixed an issue where clients using the Copy Provider Server would crash when trying to copy long file names.
- Fixed an issue where log entries were not displayed on the ISS Agent page.
- Fixed an issue where two clients connected to the same ISIS system, both running Grass Valley EDIUS Pro 7, could not access the same file.
- Fixed an issue relating to EDIUS audio waveform files on ISIS Workspaces.
- Fixed an issue on all ISIS systems where the Windows Storage Server 2008 and Windows Storage Server 2008 R2 operating systems did not wait for the System Director to shut down cleanly before the Windows OS shut down.

## Documentation Updates and Corrections

The following documentation has been updated since the last release.

### Avid ISIS 5500 and 7500 Performance Guides

The Avid ISIS 5500 and 7500 Performance Guides have been updated to reflect Media Composer v8.3.1, Adobe Final Cut Pro X uncompressed data, and XAVC support.

### Benchmark Utility Guide

The Benchmark Utility Guide omitted the following Keyboard Shortcuts:

- In the Configure Hosts panel, use Ctrl-F5 to refresh the selected hosts (or all hosts if none is selected)
- In the Results panel, use Ctrl-Alt-P to display the graph properties

In the Benchmark Preferences menu, the default ports are incorrect. The correct values are:

- Server default port: 5017
- TCP default port: 5013
- UDP default port: 5014

## New in Avid ISIS v4.7.4

ISIS v4.7.4 supports:

- ISIS | 7500 & ISIS 7000—All configurations
- ISIS | 2500 & ISIS 2000—All configurations
- ISIS | 5500 & ISIS 5000—All configurations

### Workspace Move Prioritization on ISIS | 7500 and ISIS 7000

This release includes a new control, available only on ISIS | 7500 or ISIS 7000 Systems, to expedite moving Workspaces between Storage Groups in the same Management Domain. Normally, Workspace moves are throttled to reduce the impact of the move on ISIS client operations. With the 4.7.4 release, you can optionally disable throttling to accelerate the Workspace move operation until the feature is disabled.

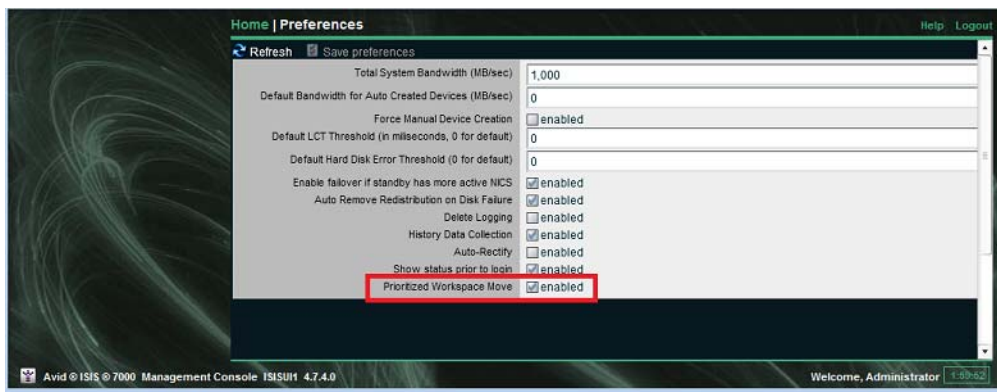
Use this control only when moving Workspaces to Storage Groups within the same Management Domain, and make sure to disable it again when the Workspace moves are completed.

This control is a global setting; it will apply to all Workspaces. Therefore, you might want to perform Workspace moves in separate operations, depending on where they are moving; for example:

- If applicable, move Workspaces between Storage Groups in different Management Domains.
- When those Workspace moves are done, enable prioritized Workspace moves, then move Workspaces between Storage Groups in the same Management Domain.
- When those Workspace moves are done, restore the control setting to the default (unchecked).

To prioritize Workspace moves (disable throttling):

1. In the Management Console, click Preferences under the Advanced heading.
2. In the Preferences panel, check the box for Prioritized Workspace Move (unchecked, or disabled, by default).



3. Click Save Preferences.
4. Move Workspaces between Storage Groups in the same Management Domain.
5. When all the Workspaces have been moved within the same Management Domain, disable prioritized Workspace moves (uncheck the box).

### Improvements to Redistribution Monitor

The Redistribution Monitor tool, introduced in Avid ISIS v4.7, has been improved as follows:

- The Redistribution Monitor tool now displays the rate for the whole system, instead of the average rate of the ISBs
- The ongoing progress display is more accurate, and updated more frequently
- Corrected an issue where, in some circumstances, the Redistribution Monitor incorrectly reported a stalled state. In this false stalled state, the Progress Bar could flicker near the end of a redistribution.

### Support for OS X 10.10 “Yosemite” Clients

This release supports running OS X Yosemite 10.10 as an ISIS client. In addition, this release includes the Myricom v1.3.4 driver, which enables 10 Gb connections to OS X 10.10. Install the driver named `myri10ge-1.3.4avid-1500-macosx10.9_10.1.dmg` from the Drivers/ISIS Client/Myricom folder in the Avid ISIS software kit.

## Support for Intel Converged Ethernet X540-T1 Network Adapter

The Avid ISIS 4.7.4 release introduces support for the Intel Converged Ethernet X540-T1 network adapter for both 1 Gb and 10 Gb clients on all ISIS platforms.

### Fixed in This Release

- Hardened the response of ISIS 7500 and ISIS 7000 systems to low-memory situations.
- Corrected an issue on ISIS 7500 and ISIS 7000 systems where uncompressed video captures could not be written to a mirrored Workspace.
- Corrected several issues on ISIS 7500 and ISIS 7000 systems with Zone 3 clients where TCP connections were being unnecessarily broken. This resulted in the Storage Managers entering a “Network Degraded” state.
- Corrected a timing problem when ISIS clients wrote updates to the parity server for a RAID6 workspace, causing the Storage Manager to assert.
- On ISIS clients v4.6.1 through v4.7.3 connected to an ISIS System Director running version 4.6.1, new files written to mirrored workspaces could have been incorrectly written.
- Corrected an issue where Windows clients in Zone 2 or 3, connected to an ISIS 5500 which was using a 4x1GbE connection to a switch, could fail to perform correctly after being upgraded to ISIS v4.7.3.
- Corrected an issue with 20 Gb clients connected to an ISIS | 7500 (or ISIS 7000) with a single 10 Gb connection to each VLAN. If one VLAN failed, all client I/O stopped until the link was re-established. Now, clients on the remaining good VLAN stay online.
- Corrected a possible vulnerability on ISIS | 2500 - 2000 Engine controllers to a Linux bash shell ShellShock attack.
- Corrected an issue where System Status History logging, if enabled, was disabled by a software upgrade.
- In some circumstances, the Management Console became unresponsive. The workaround was to log into the active System Director and restart the Avid ISIS Administration Server.

### Documentation Updates and Corrections

The Avid ISIS 7500 Setup Guide (available from the Help link in the Management Console on ISIS | 7500 and ISIS 7000 Systems) has been updated to include maintenance instructions when Cisco switches are configured for link aggregation.

All three Avid ISIS Setup Guides advise you to run PathDiag after upgrading the ISIS software. However, the PathDiag utility can crash on Mac OS X 10.10. If it does, you can restart it.

## New in Avid ISIS v4.7.3

The v4.7.3 release includes the following bug fixes and support.

ISIS v4.7.3 supports:

- ISIS | 7500 & ISIS 7000—All configurations
- ISIS | 2500 & ISIS 2000—All configurations
- ISIS | 5500 & ISIS 5000—Engines connected via 10 GbE, and direct-attached 1 GbE clients



**ISIS v4.7.3 is NOT recommended for ISIS | 5500 & ISIS 5000 connected via 4x1 GbE links to a network switch.**

## Fixed in This Release

### Client Issues

- Dual-connected clients now use only one socket per subnet to connect to a System Director. This avoids dual-connected clients being unable to validate workspaces.
- ISIS Client installer now sets the Myricom adapter advanced settings for driver versions higher than 1.1.10.
- 1 Gb Macintosh clients would get “Delayed write failure” during Benchmark Utility test.
- In some cases, Pro Tools clients were unable to write to the ISIS (“media not accessible” error).
- The ISIS kit now includes the current Adobe® Flash Player (version 15.0.0.152) for the Mac OS.
- Windows 10GbE routed clients (Zone 3 and 4) no longer cause ISIS | 7500 - 7000 ISBs running versions older than v4.5 to assert.
- Windows 10GbE routed clients (Zone 3 and 4) could experience connectivity or communication problems with ISIS servers running 4.5.x through 4.6.x.
- Windows 10GbE routed clients (Zone 3 and 4) continue to operate when one link is down to an ISIS | 7500 - 7000 running 4.7.x versions.

### Server Issues

- The following warning events are no longer logged on the standby System Director:
  - Could not retrieve HistoryDataCollection enable attribute value. Using default value: 1
  - Could not retrieve Auto-Rectify enable attribute value. Using default value: 0
- Avid ISIS Profiler incorrectly failed when run against 1 Gb NICs on the ISIS | 5500 - 5000 Expansion Engine.
- In some circumstances, the external ISIS 4.7 System Director (ISIS | 7500 - 7000, ISIS | 2500 - 2000) could assert, causing the active System Director to fail over to the standby.
- In some upgrade cases, importing the PartitionDump.bin file would fail.

## Zone 3 Support for all Interplay Production and AirSpeed 5000 Servers

All Interplay Production and AirSpeed 5000 servers are qualified for use with Zone 3 connections. This supersedes the information in the 4.7 version of the Avid ISIS Client Guide.

## Switch Configuration Files for Dell Networking N3048 Switch

In the v4.7.3 release, Avid renamed the Switch Configuration folder for the Dell Networking switches to [drive]:\Switch Configuration\ISIS x000\Dell\_Force10. In addition, this folder now includes separate sub-folders for the ISIS | 5500 - 5000 and ISIS | 2500 - 2000 systems, containing configuration files for all the supported Dell Networking switches, including the N3048. The switch configuration files are the same in each folder.

## Documentation Updates and Corrections

The Avid Network and Switch Guide has been updated to include the Dell Networking N3048 switch.

The v4.7 Avid ISIS Client Guide contains incorrect information in Chapter 1, Avid ISIS Client Manager Setup and Installation, in the section “Dual Port Network Connections,” which states, in the second paragraph:

“Dual connected ISIS | 2500 - 2000 and ISIS | 5500 - 5000 clients must be on the same subnet, but ISIS | 7500 - 7000 clients can connect to the same subnet or to both VLANs for redundancy. The dual 1 Gb connections can be connected to the same ISIS qualified switch. If you have access to both an ISIS | 5500 - 5000 and an ISIS | 7500 - 7000, one port can be connected to each infrastructure. Dual 10 Gb client connections are supported.”

These statements are no longer true, and should have been replaced with the following:

“Dual 1 Gb and 10 Gb clients are supported on either the same subnet or different subnets (VLANs) for all ISIS systems.”

## New in Avid ISIS v4.7.2

The v4.7.2 release includes the following new features and bug fixes.

### Support for Dell Networking N3024 and N3048 Switches

This release introduces support for the Dell Networking N3024 and N3048 switches for use in ISIS | 5500 and ISIS | 2500 environments. The kit includes a sample configuration file for this switch. The Avid Network and Switch Guide has been updated to include the N3024 switch.

### Support for AirSpeed v2.7.15

This release includes an ISIS 4.7.2 client for AirSpeed v2.7.15 in all ISIS environments. See [“Hardware and Software Requirements” on page 19](#).

### Myricom 1.1.14 Driver for 2x10 Gb Windows Clients

This release includes the version 1.1.14 64-bit Myricom driver for 2x10 Gb Windows clients only. The driver is not automatically installed on clients. To install the driver, download it onto your 2x10 Gb clients from the following location: `\Drivers\ISIS Client\Myricom\For_2x10_Gb_only\Myricom_1.1.14_Win_64.msi`



*When installed, the Myricom driver version reports 1.1.13; however, this is the 1.1.14 kit. This kit contains only a fix to the installer.*

### Intel 18.6 Driver for Windows 7

This release includes the version 18.6 Intel driver for Windows 7 and 8.1 clients. The driver is not automatically installed on clients. To install the driver, download it onto your Windows 7 and 8.1 clients from the following location: `\Drivers\ISIS Client\Intel_Pro1000\Intel_18.6_Win8.1_64.exe`

### Intel 19.1 Driver for Windows 7 and 8.1 for Intel i350-T2 Network Adapters

This release supports the version 19.1 Intel driver for Windows 7 and 8.1 clients that use the Intel i350-T2 network adapter. To install the driver, download it onto your Windows 7 and 8.1 clients from the Intel site.

### Documentation Updates and Translations

The following user documents were revised or are now available for this release:

- Avid ISIS Client Guide and Client Manager help in Arabic, French, German, Italian, Japanese, Korean, Russian, Spanish, and Simplified Chinese.
- Avid ISIS Administration Guide and help
- Avid ISIS File Gateway Setup and User’s guide
- Avid ISIS | 7500 - 7000 Setup Guide
- Avid Network and Switch Guide

### Fixed in This Release

- Corrected a problem with the AvidSharedStorageAccess.dll file that prevented clients that rely on Interplay Move Service from seeing all 1024 Workspaces on an ISIS system.
- Corrected a race condition in the ISIS client that could cause the client machine to crash with a 0x00000050 stop code while copying media to the ISIS shared storage server.
- When quitting the Client Manager on Macintosh clients, the default behavior for unmounting all mounted workspaces has changed from No to Yes.
- Added kernel extension signing to allow ISIS client software to work on Macintosh OSX 10.9.4 clients. See [“Supported Client Operating Systems” on page 20](#).
- Some ISIS clients could crash (blue screen) while closing a file if they could not communicate with the System Director for more than seven seconds.
- If the ISIS Log Utility was left running for more than 60 hours (two and a half days), it could crash.

## New in Avid ISIS v4.7.1

ISIS v4.7.1 was a limited release for specific customers that included an ISO file that enables AirSpeed Classic clients to work with Avid ISIS 4.7 systems.

## New in Avid ISIS v4.7

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

### High Resolution Workflows

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

### 12 Engines in ISIS | 5500 and ISIS 5000

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

### Introducing ISIS | 2500

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

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

### Support for Red Hat 6.5 as an ISIS Client

This release supports Red Hat Enterprise Linux versions 6.2, 6.3, and 6.5 on ISIS clients. For a full list of supported operating systems on ISIS clients, see [“Supported Client Operating Systems” on page 20](#).



## Dual 10 Gb Connection Support

The v4.7 release supports dual 10 Gb network connections on all ISIS systems for higher bandwidth and high availability. To support dual 10 Gb connections, Avid has qualified the Myricom 10G-PCIE2-8B2-2S. For more information, see the [Avid Configuration Guidelines and Slot Configurations](#) document on the Avid Knowledge Base.

## Preloaded USB Drive

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

## GUI and ISIS Installer Changes

- **New Redistribution Monitor**—Under the Tools heading, a new feature called the Redistribution Monitor was added. This link opens the Redistribution Monitor tool, which displays the progress of redistributions triggered by configuration changes to Storage Managers and Workspaces.
- **Show/Hide Status Console Before Login**—Administrators can now control whether the Status Console panel is displayed on the login screen of the Management Console (by changing the setting on the Advanced > Preferences screen). Prior to this release, the Status Console was visible even before a user logged in, but no links were accessible until the user logged in.
- **Storage Elements Removed**—In the Avid ISIS Management Console, the Storage Elements link was removed from the System heading; all Storage Element information has been combined with Storage Managers.
- **LDAP Sync Tool Moved**—In the Management Console, the LDAP Sync Tool has moved from under the Tools heading to the Installers list under the System heading. When you click Installers, the LDAP Sync Tool is shown in the ISISTools list. The Administration Guide describes how to install and use the LDAP Sync Tool.
- **Redesigned and Refreshed System Director Control Panel**—The entire Control Panel has a new look. The performance graphs and Metadata Usage panel were removed, as that information is available elsewhere. All the configuration operations have been consolidated into one area of the Control Panel UI. The functions to stop and start the System Director, change the password, change the System Director name, and dump metadata have changed from text buttons to icons. Finally, the Launch Viewer and Reset Event buttons have been removed.
- **Heartbeat Timeout Feature Moved**—The Heartbeat Timeout feature has been moved to the Advanced tab on the Switch Blade Agent page.
- **Low Disk Space Warning**—If the C:\ or D:\ drives on the System Director run low on space, a warning is displayed in the Status panel in the Management Console.
- **Renamed Avid ISIS installer**—Formerly Autorun.exe, now AvidISISSetup.exe.

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

## Temperature Sensor Information Added for ISIS | 2500 - 2000

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



### Fixed in this Release

- Captures could fail intermittently during an add or remove redistribution resulting in an error such as the following from the editor: “Video/Audio no longer coming into the system.”
- Removed the restriction on changing the Delete Logging setting only during maintenance periods. You can now change the setting at any time.
- The drive numbers on the i4000 and i8000 (ISIS | 7500) are now set correctly.
- An intermittent connectivity issue between 10Gbps Windows clients in Zone 3 and ISIS 7000 | 7500 has been resolved.
- Improved the launch speed of the ISIS Toolbox, LDAP Sync Tool, and Monitoring Tool.

### Corrections from Previous Release

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



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

## Recommended Releases

Avid recommends the following releases for certain ISIS models. As you plan for ISIS software upgrades, make sure you upgrade to at least the recommended version below.

ISIS Model	Recommended Minimum Releases
ISIS   7500 - 7000	ISIS v4.7.x, ISIS 4.6.x (any ISB) ISIS v4.5.x (for i500, i1000, and i2000 ISBs)
ISIS   5500 - 5000	ISIS v4.7.x, ISIS 4.6.x, ISIS v4.5.x
ISIS   2500	ISIS v4.7.7
ISIS 2000	ISIS v4.7.7

## Supported Upgrade Paths

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

Make sure you run compatible versions of the ISIS client with the ISIS server; see “[System Director and Client Version Compatibility](#)” on page 19.


The installer, AvidISISSetup.exe, determines the version of software currently on your System Director and prevents you from performing an unsupported upgrade.



*As of ISIS v4.0, when upgrading 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 a newer version.*

If applicable, a dialog box instructs you to upgrade to an intermediate version before upgrading to the current version. Make sure you correctly identify your ISIS hardware model in the table, where noted.

For instructions on upgrading your ISIS system, see the ReadMe for each release you are upgrading to, and the latest Setup Guide for your ISIS model.

Starting Version	Upgrade Path
2.4	To 4.2.2, then to 4.7.11
 <i>For ISIS software releases older than v2.4, contact Avid support.</i>	If you upgraded from 2.x, copy the metadata to the new location. See <a href="#">“Metadata Location On the System Director” on page 19</a> for more information.  Also see <a href="#">“Change in Space Reporting in v4.5” on page 18</a> and <a href="#">“Supported ISIS   7500 - 7000 System Directors” on page 18</a> .
3.0 or 3.1	To 3.2, to 4.2.2, then to 4.7.11  As soon as you upgrade to 3.2, run the Node Analysis tool (see Avid ISIS 5000 v3.2 ReadMe).  Also see <a href="#">“Change in Space Reporting in v4.5” on page 18</a> and <a href="#">“Supported ISIS   7500 - 7000 System Directors” on page 18</a> .
4.0 or 4.0.1	To 4.2.2, then to 4.7.11  Also see <a href="#">“Change in Space Reporting in v4.5” on page 18</a> and <a href="#">“Supported ISIS   7500 - 7000 System Directors” on page 18</a> .
ISIS 2000 running versions prior to 4.5	To 4.6.1, then to 4.7.11
v4.0.3 (ISIS 5000) / v4.0.4 (ISIS 7000)	To 4.7.11
4.5.x	To 4.7.11
4.6.x	To 4.7.11

### Supported ISIS | 7500 - 7000 System Directors

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

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



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

- SR2500 (Window Storage Server 2003)



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

### Change in Space Reporting in v4.5

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

## Metadata Location On the System Director

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

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

## System Director and Client Version Compatibility

The v4.7.6 and higher Client software works with the System Director v4.2.2 kit (contains v4.2.2 for ISIS 2000, v4.0.3 for ISIS 5000 and v4.0.4 for ISIS 7000) and higher.



**There are known issues with certain combinations of client and server ISIS software; do not run these combinations: 4.7.0 or 4.7.2 on 10 GbE Windows clients — routed (connected to Zone 3/Zone 4) — on ISIS 7000 running v4.0.4, v4.5, or v4.6.x.**

## System Configuration Limits

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

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

## Hardware and Software Requirements

To meet the stringent needs of media applications the ISIS family of storage solutions is built using patented intellectual property in ISIS software running on Avid ISIS hardware. Avid tests and qualifies configurations of Avid ISIS software deployed on Avid ISIS hardware. The ISIS System Director is designed to allow the binding of Avid ISIS storage *only*. Avid has not published its ISIS file system specifications, protocols, or ISIS file system


API's used among the components of the file system (ISIS System Director, ISIS client, ISIS storage expansion engines) and these are subject to change without notice. Therefore, any connection of third party storage as part of an ISIS file system is not a licensed, approved or supported configuration.

For more information, see the full [compatibility matrix](#), available on the Avid support site.

## Supported Client Operating Systems

The following table lists the supported Avid client operating systems with Avid ISIS 4.7.11. All of the listed client operating systems support single or dual 10 Gb Ethernet network interface cards.

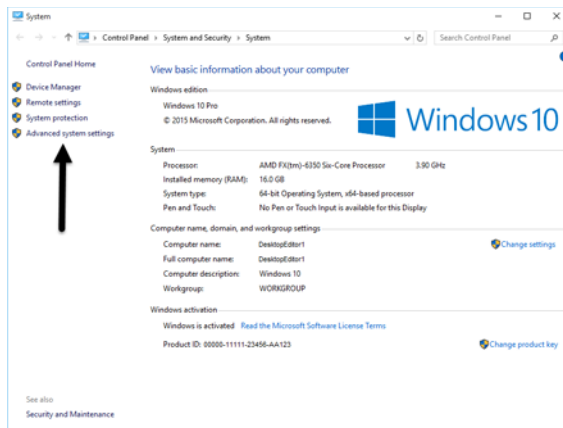
### Supported Client Operating Systems and Service Packs

Operating System	Version and Notes
Windows 10	Latest Service Pack Defer automatic driver updates; see <a href="#">“Preventing Windows 10 Automatic Driver Updates”</a> on page 20
Windows 8.1	Latest Service Pack
Windows 7 (64 bit)	Latest Service Pack
Windows XP (32 bit)	Service Pack 3; for AirSpeed MultiStream only
Windows Server 2012 R1 and R2 (64 bit)	Latest Service Pack
Windows Storage Server 2008 R1 and R2 (64 bit)	Latest Service Pack
Windows Storage Server 2003	Service Pack 2
Windows Server 2008 R1 and R2 (64 bit)	Latest Service Pack
Windows Storage Server 2008 R1 and R2 (64 bit)	Latest Service Pack
Windows Server 2003 (64 bit)	Latest Service Pack
 <i>ISIS 4.7 is the last release to support this OS.</i>	
OS X El Capitan (64 bit kernel)	10.11
OS X Yosemite (64 bit kernel)	10.10 with latest updates
OS X Mavericks (64 bit kernel)	10.9.5 or earlier with latest updates
OS X Mountain Lion (64 bit kernel)	10.8.x with latest updates
Red Hat Enterprise Linux (64 bit kernel)	6.2, 6.3, 6.5

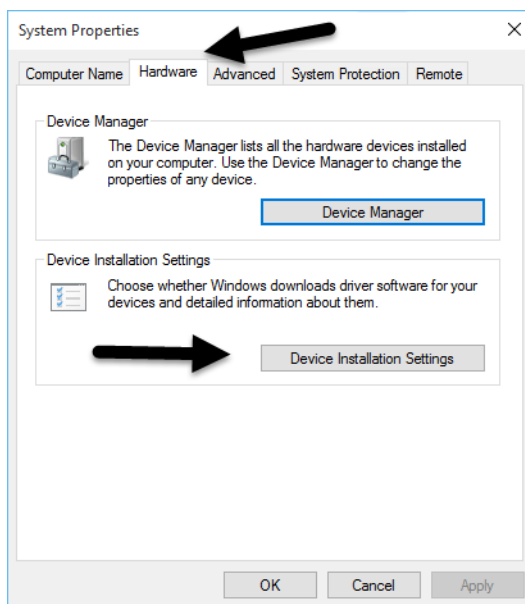
## Preventing Windows 10 Automatic Driver Updates

On client systems running Windows 10, automatic Windows driver updates can remove critical NIC driver settings needed for the correct functioning of the Avid Client. To prevent disruption of clients running Windows 10 (Professional and Enterprise), you can defer automatic driver updates as follows:

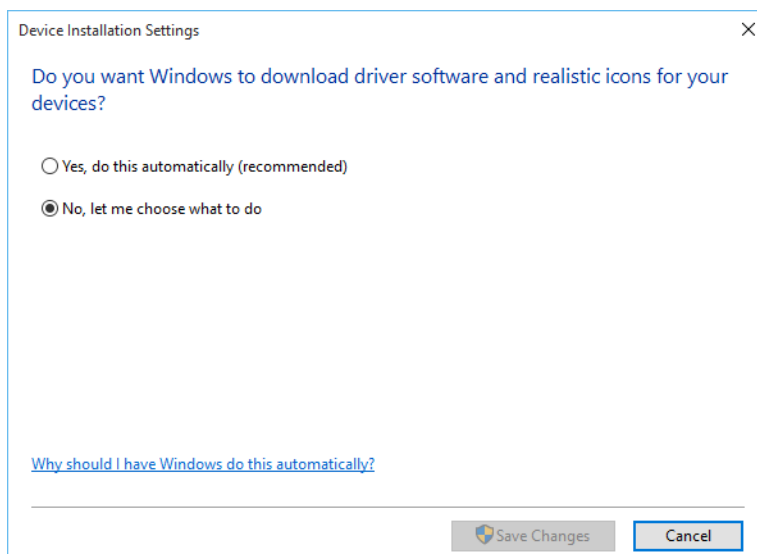
1. Right-click the “This PC” icon (formerly called “This Computer”).
2. Select Properties.
3. Select Advanced System Settings.



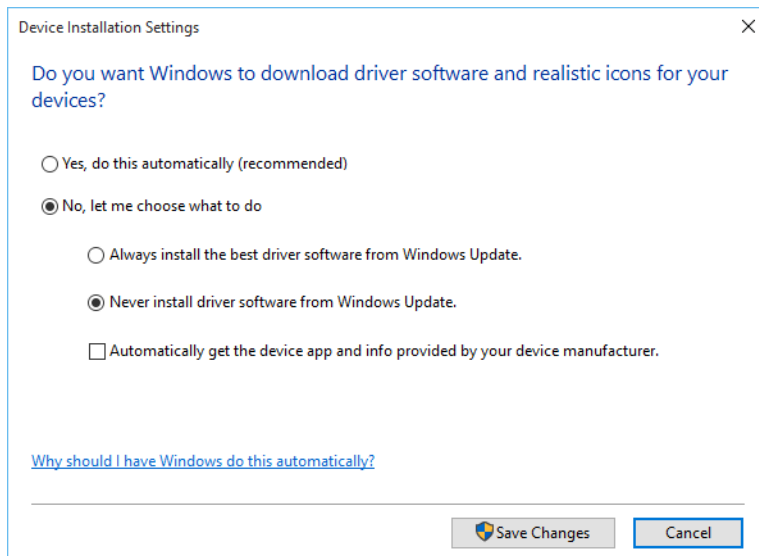
4. Click the Hardware tab, then click Device Installation Settings.



5. Select the option “No, let me choose what to do.”



6. Select the option “Never install driver software from Windows Update, and deselect the option “Automatically get the device app.”





7. Click Save Changes.

## Supported Browsers in an ISIS Environment

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

### Supported Client Browser per Operating System

Browser	Operating System
Internet Explorer 7 and Internet Explorer 8	Windows Storage Server 2003 only
Internet Explorer 9 and Internet Explorer 10	Windows Storage Server 2008 and later
Safari	OS X
Mozilla Firefox	Windows, OS X, and Linux
	 <i>If you plan to use the Firefox browser for FTP connections via the File Gateway, use the following format in your browser: username: virtual host name/ftpuser</i>
Google Chrome	Windows and OS X
	 <i>If you plan to use the Chrome browser for FTP connections via the File Gateway, use the following format in your browser: ftp://ftpuser@virtual host name:password@ alias.domain.com</i>

## Supported Ethernet Cards and Drivers

Avid supports the following network interface cards for the following client operating systems. For your specific platform, see the [Avid Configuration Guidelines and Slot Configurations](#) document on the Avid Knowledge Base.

### Supported NICs for Client Operating Systems

Windows Network Cards	OS X Network Cards	Linux Network Cards
Intel PRO/1000 PF (Optical)	Small Tree P2EG-2-T	Intel PRO/1000 PF (Optical)
Intel PRO/1000 PT (Copper)	Small Tree P2E10G-1-T	Intel PRO/1000 PT (Copper)
Intel i350 T2 (Copper)	Myricom 10G-PCIE-8B-S	Intel i350 T2 (Copper)
Intel Converged Ethernet X540-T1	Myricom 10G-PCIE2-8B2-2S	Myricom 10G-PCIE-8B-S
Myricom 10G-PCIE-8B-S		
Myricom 10G-PCIE2-8B2-2S		

For most Windows based editing clients that connect to the Avid ISIS system, Intel PRO Ethernet adapter boards are recommended.

### Client Drivers in the ISIS 4.7.x Kit

The Intel and Myricom drivers qualified in this release are included in the Avid ISIS software installer kit (\Drivers\ISIS Client\Intel\_Pro1000 folder and \Drivers\ISIS Client\Myricom folder). Check the driver version listed in the Windows Control Panel on your Windows clients and ISIS System Directors.

The Avid ISIS 4.7.4 release introduced support for the Intel Converged Ethernet X540-T1 network adapter for 1Gb clients on all ISIS platforms. 10Gb is supported with the ISIS | 5500 and ISIS | 2500.



**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.**

OS X and some Windows clients have been qualified to use the on-board 1 Gb ports. For instructions on installing the board and software, see the Avid ISIS Client Guide.

### Intel Network Drivers for Client Operating Systems

Operating System	Driver installer
Windows Server 2012 R2	Run Windows Update
Windows Server 2012 R1	<ul style="list-style-type: none"> <li>Intel driver version 18.6 or higher (For PRO/1000 PT NICs)</li> <li>Intel driver version 19.1 or higher (For i350 T2 NICs)</li> </ul>
Windows 10	Intel driver version 20.4 or higher
Windows 8 (64-bit)	<ul style="list-style-type: none"> <li>Intel driver version 18.6 or higher (For PRO/1000 PT NICs)</li> <li>Intel driver version 19.1 or higher (For i350 T2 NICs)</li> </ul>
Windows 7 (64-bit)	<ul style="list-style-type: none"> <li>Intel driver version 18.6 or higher (For PRO/1000 PT NICs)</li> <li>Intel driver version 19.1 or higher (For i350 T2 NICs)</li> </ul>
Windows Storage Server 2008 R2 (64-bit)	<ul style="list-style-type: none"> <li>Intel driver version 18.6 or higher (For PRO/1000 PT NICs)</li> <li>Intel driver version 19.1 or higher (For i350 T2 NICs)</li> <li>Intel driver version 17.4 or higher</li> </ul>
Windows Storage Server 2008 (64-bit)	Intel driver version 17.4 or higher
Windows Storage Server 2003 (64-bit)	Intel driver version 17.4 or higher

## Intel Network Drivers for Client Operating Systems

Operating System	Driver installer
Windows Server 2003 (64-bit)	Intel driver version 17.4 or higher
Windows XP (32-bit—for AirSpeed MS only)	Intel driver version 17.4 or higher

## Intel PRO/1000 Network Adapter Settings

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

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

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

**To load the Intel PRO driver on a Windows system:**

1. Copy the file titled Intel\_xx.x driver to your system; found on the *Avid ISIS software kit* in (clients) \Drivers\ISIS Client\Intel\_Pro1000\ folder.
2. Double-click the .exe file to expand the compressed file and run the installer.
3. Accept the default settings to install the driver.



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

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

## Qualified and Approved ISIS Switches

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

[Update March 2017] In addition, Avid has approved the Dell Networks S4048-ON switch for use with Avid ISIS | 5500 systems.

The Dell Networks S4048-ON is a 48-port SFP+ 10Gbps Ethernet switch with 6-ports QSFP 40Gbps Ethernet. This switch is ideal for 10G ISIS aggregation with the option to uplink via 40Gbps to the core network. The 10G SFP+ interfaces can be equipped with Short Range (SR) optical transceivers or Direct Attach (Twinax) cables.

The Avid supplied Dell S4048-ON includes redundant power supplies, with IO to PSU airflow and 5 years of Dell ProSupport.



SFP+, QSFP optics and Dell Direct Attach cabled must be ordered separately as required. The Dell S4048-ON replaces the Dell (Force10) S4810 switch.

## Cascaded Switches

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

## STIGs Qualification

The following Avid ISIS systems comply with US Defense Information Systems Agency (DISA) Security Technical Implementation Guides (STIGs) requirements for network devices:

- Avid ISIS 7500 (and 7000) v4.7.x AS3000 System Director with the Windows Storage Server 2008 operating system or the Windows Storage Server 2008 R2 operating system
- Avid ISIS 5500 (and 5000) v4.7.x System Director with the Windows Storage Server 2008 operating system or the Windows Storage Server 2008 R2 operating system
- Avid ISIS 2500 (and 2000) v4.7.x AS3000 System Director with the Windows Storage Server 2008 R2 operating system



*Only Windows 8 and Windows 7 clients were qualified in the STIG environment. OS X and Linux clients are not supported.*

For more information about STIGs, see the following URL: <http://iase.disa.mil/stigs/Pages/index.aspx>

## Known Issues

The following are known issues with the Avid ISIS software.

### Common ISIS Infrastructure Issues

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

- On an ISIS system with a single Workspace, if you move the resize slider all the way to the right, the resize handle disappears, and you are unable to move it back to the left.

**Workaround:** Do either of the following: Move the slider to the left, then you can zoom in again to the original scale.

- Click the Zoom out button on the Workspace size heading until the resize handle becomes visible again.
  - Change the Workspace size in the Details panel. When the Workspace is resized, the resize handle becomes available.
- After upgrading a client, the Management Console might not be displayed correctly in Safari. The issue is the Adobe Flash Player version. The Management Console warns you to upgrade your Flash Player version to the version included in the ISIS kit, available on the Installers page in the Management Console. However, this might be older than the version on the client after the upgrade. Avid attempts to include the latest Flash Player version in its kits, but Adobe releases new versions often.

**Workaround:** If a later version of Flash Player is available for your OS, download and install it from the following URL: <https://www.adobe.com/products/flashplayer/distribution3.html>. The Management Console will work correctly after you install the new version of Flash Player.

- Deleting large numbers of files during a redistribution can result in some blocks not getting deleted correctly, resulting in a mismatch between the Workspace and Storage Group sizes.

**Workaround:** Performing a block rectify operation after the redistribution is complete resolves the issue and cleans up the undeleted blocks.

- Email notification settings are not replicated to the Standby System Director.

**Workaround:** Configure Notification Services on both the Active and the Standby System Director.

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

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

- If you are unable to start the Management Console in a browser, log into the active System Director and launch the Console from the Launch Pad.

- Chinese and Korean characters are not supported in the LDAP Sync Tool.

- When accessing the Storage Manager agent using a Chrome browser, you might receive a “This web page is not available” message.

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

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



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

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

#### **To restart the agent without disrupting clients:**

1. Install PUTTY or similar SSH Client on the System Director, any client on the network, or on a system connected to the management port.

<http://www.chiark.greenend.org.uk/~sgtatham/putty/>

2. Run SSH Client connecting to Storage Manager using an IP address listed in Management Console.
3. Login.

Username: **root**

Password: *<local admin password>* (Default **se-admin**)

4. Stop the Storage Manager web agent using the following command: **/etc/init.d/userveragent stop**

5. Wait approximately 30 seconds.
6. Restart the Storage Manager web agent using the following command: `/etc/init.d/userveragent start`
7. Wait approximately 30 seconds.
8. Verify the agent is running again by accessing the Management Console > Storage Manager > Agent page.
9. Close the SSH Client.

## Client Issues

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

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

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

- On a Red Hat Linux client, if the Management Console will not launch from the Client Manager, open a browser window to log into the ISIS.
- When using Nautilus (the default file browser included with Red Hat Enterprise Linux v6.2), clients might experience long wait times browsing folders containing files that do not have a file extension.

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

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

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

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

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

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

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

**Workaround:** You have the following options.

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



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

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

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

## ISIS | 7500 - 7000 Infrastructure Issues

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

- When rendering media to do a mixdown on a “Westmere” Macintosh client with the Client Type set to Low Resolution in the Client Manager > Preferences > General settings, the Macintosh client might become unresponsive.

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

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

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

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

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

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

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

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

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

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

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

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

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



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

**To suspend a redistribution and rectify blocks:**

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

## ISIS | 5500 - 5000 Infrastructure Issues

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

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

**Workaround:** Always click Apply before you click Close.

## ISIS | 2500 - 2000 Infrastructure Issues

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

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

## File Gateway Issues

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

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

Invalid characters are as follows:

? \* < > | : " \ /

This hang occurs on Mac OS 10.6.2 and later.

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

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

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

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

## Special Notes

This section contains important information about the Avid ISIS environment.

### Enabling Flash Player on Windows Server 2012

The Management Console relies on Adobe Flash Player. On Windows Server 2012, Flash is included as a platform feature, but is disabled by default. To enable Flash, you must enable the Desktop Experience feature.

#### To enable the Desktop Experience on Windows Server 2012:

1. Open Server Manager and click Add Roles and Features.
2. In the Add Roles and Features Wizard, specify the appropriate values on the Installation Type, Server Selection, and Server Roles pages.
3. On the Features page, expand User Interfaces and Infrastructure and select Desktop Experience.
4. On the Confirmation page, select Restart the destination server automatically if required and click Install.
5. Add the feature and reboot the system.
6. Run Windows Update to receive the latest security updates to the bundled Flash Player.

### User Permissions

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

### Avid Interplay Authentication

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

### Avid Interplay Copy Service and Move Service in Zone 3

The Avid Interplay Copy Service and Move Service using an AS3000 or the SR2500 Interplay Copy/Move server with a single 10 Gb Myricom board installed has been qualified in Zone 3 of the ISIS | 7500 - 7000 and ISIS | 5500 environments. This qualification requires the ISIS 7000 v2.4, ISIS 5000 v3.2, or ISIS v4.x infrastructures with ISIS v3.5 and later client software. (Some combinations of ISIS client and server software are not recommended; see [“System Director and Client Version Compatibility” on page 19.](#))

## LDAP Requires Unicode User Names and Passwords

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

## Fast User Switching Not Supported

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

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

## Avid ISIS Firewall

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

## Multiple ISIS Systems Must be on Separate Networks

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

## Macintosh Resource Files and Windows Clients

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

## Adobe Premiere Pro Software Approved

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

- Adobe Premiere 10 Gb clients are supported.
- Avid ISIS supports Adobe Premiere Pro clients in Zones 1, 2, and 3.
- Media from both Adobe Premier and Avid Media Composer are able to co-exist in the same Storage Group. Although for optimal performance, you should not mix Avid and Adobe Premier editors in the same Storage Group.
- Adobe Premiere clients follow the same guidelines as for Avid editors in regards to the Avid ISIS Client Manager Preference settings. The default Client Type setting is set to Medium Resolution (limited to resolutions that draw 16 MB/s or less). Use the High Resolution setting when working with High Definition media (resolutions that draw higher than 16 MB/s). There are some HD resolutions that draw less than 16



MB/s for a single stream, but you should still use the High Resolution setting (for example, XDCAMHD 50). For information on how many streams were qualified per client at various resolutions, see the following documents:

- [Avid ISIS | 2500 - 2000 Performance Guide v4.7.3](#)
- [Avid ISIS | 5500 - 5000 Performance Guide v4.7.4](#)
- [Avid ISIS | 7500 - 7000 Performance Guide v4.7.4](#)

## Final Cut Pro X Software Approved

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

- [Avid ISIS | 2500 - 2000 Performance Guide v4.7.3](#)
- [Avid ISIS | 5500 - 5000 Performance Guide v4.7.4](#)
- [Avid ISIS | 7500 - 7000 Performance Guide v4.7.4](#)

## Virus Protection

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

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



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

## Uninterruptible Power Supply

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

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

## Avid ISIS | 7500 - 7000 Special Notes

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

### Upgrading Unstacked Switches

If you need to upgrade switches that are not yet stacked, the Avid ISIS software kit includes the Avid ISIS Upgrade Utility. This stand-alone application allows field engineers to start and monitor the installation of switch and ISB upgrades from a laptop connected to Avid ISIS switch through the management port. This utility does not



replace the current upgrade process. Its primary function is for upgrading a switch or a pair of switches that is incompatible with an existing stacked network. Insertion of these switches into the network before the upgrade could disrupt or compromise the network's operation. For instruction on using the utility, see the *Avid ISIS | 7500 - 7000 Setup Guide*.

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

## Spanning Tree PortFast Required with Dual Network Client Ports

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

## Applying the Microsoft HotFix KB2685007 on Windows 7

Microsoft hotfix KB2685007 applies to both the ISIS | 7500 and the ISIS | 5500 infrastructures. See [Applying the Microsoft HotFix KB2685007 on Windows 7](#) for more information.

## Avid ISIS | 5500 - 5000 Special Notes

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

### Applying the Microsoft HotFix KB2685007 on Windows 7

Windows Server 2008 R2 and Windows 7 are both affected by a UDP issue which restricts maximum throughput of ISIS clients connecting to ISIS | 5500 - 5000 and ISIS| 7500 - 7000. This is relevant to all ISIS 4.x versions before March 2014, but has not been tested on earlier versions.

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

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

Along with installing the hotfix, you must also edit the registry key (see next page) to realize the performance increase.

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



**This hotfix is required for 2 x 1 GbE Windows 7 clients connecting to an ISIS | 7500 - 7000, but is not required for Windows 8 clients.**

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

Follow the instructions to download the hotfix. Do not click the “Fix it for me” link; this does not work on Windows 7. Instead, run the file named `447595_intl_x64_zip.exe` and specify a path to a location on the client system. Navigate to that path and run the file `Windows6.1-KB2685007-x64.msu`.

Use the following procedure to create a new registry value.

**To manually create a new registry value:**

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



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

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

## Single Engine Configurations with Routed Clients

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

## Avid ISIS | 2500 - 2000 Special Notes

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

### Moving Workspaces

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

- **Interplay Workflows**  
Avid Interplay v2.6 and v2.7 have been qualified in the Avid ISIS v4.5 ISIS environments. You can move assets from one ISIS system to another using Interplay workflows. The Interplay Media Services is required. Interplay workgroups with a single IP Database for multiple ISIS configurations can use the Interplay Transcode and Interplay Move services to move media. To move media between Interplay workgroup configurations, use Interplay Copy, Interplay Delivery, and Interplay Transfer.
- **AirSpeed Workflows**  
Avid AirSpeed 5000 v2.1, AirSpeed Multi Stream v1.8.6 and AirSpeed v2.7.15 have been qualified in the Avid ISIS v4.5 ISIS environments. The AirSpeed 5000 can capture high resolution to online environments, and proxy to nearline environments (or proxy to online and high resolution on nearline). This allows you place material directly to where you need it and not have to move it.
- **Editor Workflows**  
Editors can move clips and sequences between ISIS workspaces using the Consolidate/Transcode feature, In addition, with online and nearline workspaces mounted on a single client, you can drag files from one workspace to another.



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

- Data Migration Utility Workflows

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

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

- RichCopy Workflows

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

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