

Avid® ISIS® Client Guide

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# **Using This Guide**

The Avid® ISIS® media network provides a high-performance distributed file system that contains high-capacity shared media storage for workgroups of connected Avid editing workstations. This user's guide describes how to connect your client system to the media network, mount workspaces, and configure your system for best performance.

Unless noted otherwise, the material in this document applies to the Windows®, Mac OS® X, and Linux operating systems. The majority of screen shots in this document were captured on a Windows system, but the information applies to both Windows and Mac OS X systems. Where differences exist, both Windows and Mac OS X screen shots are shown.



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.

## Who Should Use This Guide

This user's guide is intended for users who need to access workspaces on the Avid ISIS media network. You should have a basic understanding of how to use and manage the Windows operating system or the Mac OS X systems, and you should be familiar with basic workgroup and network concepts.

# Symbols and Conventions

Avid documentation uses the following symbols and conventions:

Symbol or Convention	Meaning or Action
	A note provides important related information, reminders, recommendations, and strong suggestions.
$\triangle$	A caution means that a specific action you take could cause harm to your computer or cause you to lose data.
	A warning describes an action that could cause you physical harm. Follow the guidelines in this document or on the unit itself when handling electrical equipment.

Symbol or Convention	Meaning or Action	
>	This symbol indicates menu commands (and subcommands) in the order you select them. For example, File > Import means to open the File menu and then select the Import command.	
•	This symbol indicates a single-step procedure. Multiple arrows in a list indicate that you perform one of the actions listed.	
(Windows), (Windows only), (Macintosh), or (Macintosh only)	This text indicates that the information applies only to the specified operating system, either Windows or Macintosh OS X.	
Bold font	Bold font is primarily used in task instructions to identify user interface items and keyboard sequences.	
Italic font	Italic font is used to emphasize certain words and to indicate variables.	
Courier Bold font	Courier Bold font identifies text that you type.	
Ctrl+key or mouse action	Press and hold the first key while you press the last key or perform the mouse action. For example, Command+Option+C or Ctrl+drag.	
(pipe character)	The pipe character is used in some Avid product names, such as Interplay   Production. In this document, the pipe is used in product names when they are in headings or at their first use in text.	

# 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 installation 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.

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. 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 online documentation contains all the product documentation in PDF format. You can access the documentation in the AvidISISDocumentation folder on the Avid ISIS installer kit. You need to download and install Acrobat Reader on your Avid ISIS before you can access the PDF documentation.



You need to download and install Acrobat Reader on your Avid ISIS before you can access the PDF documentation.

#### To access the online documentation from the installer kit:

- 1. Insert your Avid ISIS USB flash drive with the Avid ISIS software kit into the USB port.
- 2. Navigate to the [USB flash drive]:\.AvidISISDocumentation folder, and double-click the PDF file for the document you want to view.

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# 1 Avid ISIS Client Manager Setup and Installation

Most Windows® editing clients require the 1 Gb Intel® Pro 1000 PT or PF Ethernet network adapter to connect to the Avid ISIS system, even if the clients are connected to an external switch. For the most up to date list of Windows computers that require the Intel Pro 1000 Ethernet network adapter, see the *Avid ISIS ReadMe*. Macintosh clients and some Windows clients have been qualified to use the onboard 1 Gb ports.

# Intel Pro/1000 Network Adapter and Driver Installation

The Intel Pro 1000 Ethernet network adapters are recommended for most Windows editing systems that connect to the Avid ISIS system. The Intel Pro 1000 PT and Intel i350 T2 are copper interfaces and the Intel Pro 1000 PF is an optical interface. Depending on the Intel network adapter used in your system, you must load the appropriate driver from the appropriate folder. The Intel drivers qualified in this release are included in the Avid ISIS software installer kit, in the \Drivers\ISIS Client\Intel\_Pro1000\ folder. Install the newest qualified driver (Intel\_xx) in the folder. Check your driver version in the Windows Control Panel.



For the latest supported Ethernet network adapters and driver versions, see the Avid ISIS ReadMe that corresponds with your software release.

## Intel Pro/1000 Slot Locations

For the correct slot locations for network adapters for client systems qualified with the Avid ISIS, see the Avid Configuration Guidelines and Clot Configurations Knowledge Base () and select the platform you have or are considering.

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

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

- After you install the Intel Pro 1000 network adapter and restart your system, you might receive a Hardware Wizard message about looking for the Intel Pro 1000 driver. Cancel the message.
- 2. Copy the file titled Intel\_xx.x driver to your client system; found on the *Avid ISIS* software kit in the \Drivers\ISIS Client\Intel Pro1000\ folder.
- 3. Double-click the .exe file to expand the compressed file and run the installer.
- 4. Accept the default settings to install the driver.



The default Intel transmit and receive descriptors are set to 256 however, when loading the Avid ISIS client software the transmit and receive descriptors are set to 1024. For more information, see "1 Gb Network Adapter Settings (Reference)" on page 8.

5. Continue with setting the IP address; see "Configuring the Client Network Properties" on page 28.

# 1 Gb Network Adapter Settings (Reference)

When you install the client software and each time you start the Client Manager, especially on Windows clients, some network adapter settings are checked and changed automatically if necessary. The following settings for Windows clients are provided for reference.

1 Gb Network Adapters		
Option	Setting	
Receive Buffers	1024	
Transmit Buffers	1024	

For Macintosh clients, make sure to use the custom driver installer from the Avid kit. On 1 Gb Macintosh clients, the custom driver sets the MTU value to 1500. No changes are made for 10 Gb Macintosh clients.

The Avid Client installer and Client Manager does not check for or change any network adapter settings on Linux systems.

### Modifying the 1 Gb Pro/1000 Network Adapter Settings (Windows)

Under normal circumstances, you do not have to change the network adapter settings. The Client Manager installer checks for specific hardware platforms (Intel, Broadcom, and Myricom) and makes changes only to those.

If you have a different adapter, you might need to change the settings manually. The following procedure is provided for reference.

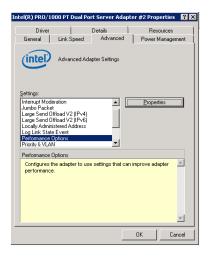
#### To access the network port properties:

1. Click Start and type devmgmt.msc in the Search text box.

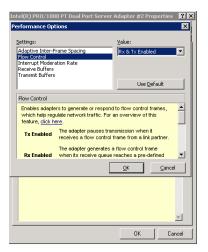
If using Windows 8, you can get to the Search text box by pressing the Windows key on your keyboard and start typing on the Windows 8 desktop.

The Device Manager dialog window opens.

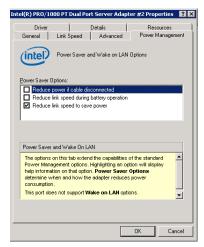
- 2. Double-click the Network adapters category to expand the list.
- 3. Right-click the first Pro 1000 network port and select Properties.
- 4. Click the Advanced tab.



5. Click Performance Options in the Setting list, then click Properties.



- a. Click Flow Control and set the Value to Rx&Tx Enabled.
- b. Click Interrupt Moderation Rate and set the Value to Enabled.
- c. Click Interrupt Throttling Rate and set the Value to Adaptive.
- d. Make sure that the Receive Buffers Value is set to 1024.
- e. Make sure that the Transmit Buffers Value is set to 1024.
- f. Click OK to close the Performance Options.
- 6. Click the Power Management tab.



- a. Deselect the "Reduce power if cable disconnected" power saving option.
- b. Deselect the "Reduce link speed during standby" power saving option.

- 7. Click OK to close the Server Adapter Properties dialog box.
- 8. (Option) If this is a dual port network adapter, repeat steps 3 through 7 to configure the second Intel Pro 1000 port.
- 9. Restart the client system.

## **Dual Port Network Connections**

Dual 1 Gb Ethernet connections allow you to use a dual-attached client for redundancy and performance enhancements. The dual port Intel Pro network adapter is supported with Windows clients and the built-in dual Ethernet ports are supported with Macintosh clients. Each port is configured separately.

When using a dual port configuration, make sure both ports are enabled in the ISIS Client Manager Network Interface Settings and the network properties (see "Enabling the Network Interface" on page 51 and "Configuring the Client Network Properties" on page 28). 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.

# **Myricom 10 Gb Network Adapter and Driver**

The Myricom® 10 Gb Ethernet adapter is qualified on Windows, Macintosh, and Linux operating systems for Avid editing ultra high resolution clients (UHRC). These 10 Gb clients connect directly into the ISIS Engine in a direct connect configuration or to the 10 Gb port of the switch.

If your client cannot connect directly to an Avid ISIS Engine, Avid has qualified several switches that provide 10 Gb connections. For information on qualified switches, see the *Avid ISIS ReadMe*.



The Myricom 10 Gb Ethernet driver is automatically installed on Linux clients when Linux clients install the ISIS Client software.

Once your Avid ISIS 10 Gb client hardware and software is installed, use the Ultra High Resolution setting in the Client Manager Preferences with Avid editing clients.

## **Installing the Myricom Network Adapter on Windows Clients**

The Myricom driver v1.1.10 or later is required for 10 Gb Windows clients. Copy the installer to your Avid editing client and use the following information to set up the Myricom 10 Gb network adapter. The Myricom driver can be found in the \Drivers\ISIS Client\Myricom\ folder of the ISIS software kit.



The driver installer functions the same whether you are installing the Myricom driver for the first time or upgrading an existing Myricom driver. If you are upgrading your Myricom driver start with step 3.

#### To install the Myricom network adapter and driver in Windows clients:

1. Shut down the Avid editing system.

and Slot Configurations.

- Install Myricom network adapter in the appropriate slot.
   For slot information, search the Avid Knowledge Base for System Configuration Guidelines
- 3. Copy the Myricom driver from the Avid ISIS software kit to the Windows 10 Gb 64-bit client.

The Myricom driver can be found in the \Drivers\ISIS Client\Myricom\ folder.



The Myricom folder contains a 32-bit version for the Windows XP operating system, and a 64-bit version for the other supported Windows client operating systems.

- 4. Double-click the myricom\_1.1.10\_win\_32.msi or myricom\_1.1.10\_win\_64.msi installer and follow the on screen instructions, accepting the default settings.
  - The installer functions the same whether you are installing the Myricom driver for the first time or upgrading an existing Myricom driver.
- 5. Install Avid ISIS client software.
- 6. Restart the client after the installation is complete.
- 7. Start the Avid ISIS client software and select the following UHRC requirements:
  - Select the Ultra High Resolution setting in the Client Manager Preferences.
  - Mount a workspace.

## Myricom 10 Gb Network Adapter Settings on Windows Clients

When installing the Client software, the Myricom driver settings are automatically set for you. The following table provides the Myricom 10 Gb network adapter settings as a reference.

#### Myricom 10 Gb Network Settings

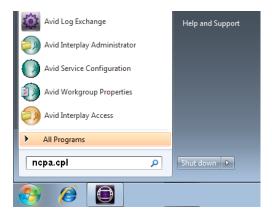
Option	Setting
Flow Control	On
Interrupt Coalescing Delay	2
Receive Buffers	2048
MTU	1500
Receive Side Scaling (RSS)	Disabled

Under normal circumstances, you do not have to change the network adapter settings. The Client installer checks for specific hardware platforms (Intel, Broadcom, and Myricom) and makes changes only to those.

If you have a different adapter, you might need to change the settings manually. The following procedure is provided for reference.

#### To configure the 10 Gb Myricom network adapter in Windows clients:

1. Click Start and type ncpa.cpl in the Search text box.

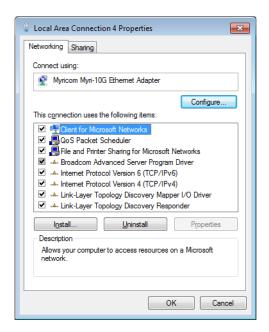


(On Windows 8, open the Search text box by pressing the Windows key on your keyboard and start typing on the Windows 8 desktop.)

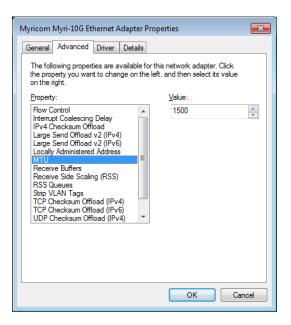
2. Right-click on the Myricom adapter and select Properties.



## 3. Click Configure.



4. Click the Advanced tab.



#### 5. Click OK.

After changing the Myricom driver settings, restart your client system.

## **Installing the Myricom Network Adapter on Macintosh Clients**

The Avid ISIS software is available on the Avid ISIS Software kit. Load the files on your Avid editing client and use the following information to set up the Myricom 10 Gb network adapter.

#### To install the Myricom network adapter in Macintosh clients:

- 1. Shut down the Avid editing system.
- 2. Install the Myricom network adapter in the appropriate slot. For slot information, search the Avid Knowledge Base for System Configuration Guidelines and Slot Configurations.
- 3. Double-click the Myri10GE-xx.dmg file to mount the file.
  - The file (myri10ge-macosx-xx.dmg) can be found on the Avid ISIS software kit in the Drivers/ISIS Client/Myricom/ folder.
- 4. Double-click the Myri10GE-xx.mpkg file to run the installer package.
  - Follow the on-screen instructions.
- 5. Install Myricom driver following the default prompts.
- 6. Set the "Myricom Network Adapter Settings on Macintosh Clients" on page 16.
- 7. Install Avid ISIS client software.

- 8. Restart the client to finish the installation.
- 9. Start the Avid ISIS client software and select the following UHRC requirements:
  - Select the Ultra High Resolution setting in the Client Manager Preferences.
  - Mount a 512 KB chunk size workspace.

## **Myricom Network Adapter Settings on Macintosh Clients**

The Myricom 10 Gb network adapter requires the following settings.

### To configure the Myricom network adapter in Macintosh clients:

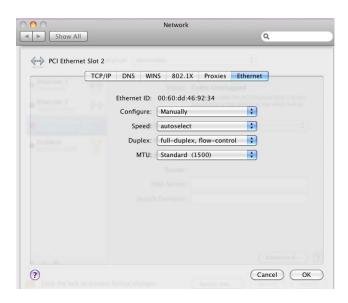
1. On your Macintosh 10 Gb client, click Apple > System Preferences.



- 2. In the Internet & Wireless section, click Network.
- 3. In the left pane, select the Myricom entry and click Advanced.



4. Click the Ethernet tab (depending on your Mac OS, this selection could be the Hardware tab).



5. Select the following settings.

#### Myricom 10 Gb Network Settings

Option	Setting
Configure	Manually
Speed	Autoselect
Duplex	Full - Duplex, Flow-Control
MTU	Standard (1500)

#### 6. Click OK.

After changing the Myricom driver settings, restart your client system.

## **Updating the Myricom Driver on Macintosh Clients**

The Myricom driver v1.3 or later is required for 10 Gb Macintosh clients with Mac OS v10.7.*x* and v10.8.*x*. Previous versions of the Myricom driver do not work.

#### To install the Myricom driver on Macintosh clients:

- Copy the Myri10GE-xx.dmg file from the Avid ISIS software installer kit to your 10 Gb
  Macintosh client. The file is located in the following location:
  Tools 3rdParty\Drivers and Firmware\Myricom\Mac\ folder.
- 2. Double-click the Myri10GE-xx.dmg file to mount the file.
- 3. Double-click the installer package to run the installer.
- 4. Install Myricom driver following the default prompts.
- 5. Continue with "Myricom Network Adapter Settings on Macintosh Clients" on page 16.
  When you start the Avid ISIS client software, select the following UHRC requirements:
  - Select the Ultra High Resolution setting in the Client Manager Preferences.
  - Mount a 512 KB chunk size workspace.

## **Client Software Installation**

This section contains information about installing or upgrading the client software on your system. A user account with Administrator privileges is required to install Avid ISIS client software on your workstations.

## **Loading Client Software**

You can load the Client software in the following ways:

• Use a browser to reach the ISIS Management Console and load it from the System Director.



To use the ISIS Management Console, you need Adobe® Flash® Player (v11.x or 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 software Management Console > Installers page.

- Download the client installers from the Management Console and copy the software to a USB flash drive.
- Store the client software somewhere on the network and allow everyone who needs the software to gain access to it and load it.
- Select the "ISIS Windows Client" software package from the installer splash screen and click Apply, which uninstalls the earlier version of the software without having to use the Windows Control Panel and installs the new software with a single click.

When installing Avid ISIS client software on Windows systems, make sure you are up-to-date with your Windows critical updates.

#### To install the client software using a browser:

- 1. Start your browser application.
- 2. Run your Windows Update and accept all "High-priority Updates."
- 3. Depending on your ISIS system, type the following in your browser.
  - ▶ ISIS 5500 http://IP address of System Director
  - ▶ ISIS | 7500 and ISIS | 2500 https://IP address of System Director:5015



If your Avid ISIS network includes a Domain Name System (DNS), you can type the System Director's name in the browser (default Virtual name is AvidISIS).

The ISIS Management Console opens.

- 4. Type your ISIS user name and password.
- 5. Click the Installers icon.

An Installer Downloads screen opens.



- 6. Click the appropriate client installer:
  - ▶ Windows \*.msi
  - ▶ Macintosh \*.dmg
  - Linux \*.bin

You can choose either to save or run the installation software; either is acceptable.

7. Restart the client if prompted.

The client software starts automatically when the client restarts.

## ISIS Client Software Installation

Besides the Windows \*.msi file available in the Installers page of the Management Console, Windows clients can install the ISIS Client software using the software kit splash screen.

#### To install 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 your Windows client system.
- 3. Double-click the AvidISISSetup.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. Update the Intel Pro driver on your client system; see "Loading or Updating the Intel Pro Driver on Windows Clients" on page 8.
- 7. 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 Avid ISIS Macintosh client software:

- 1. Copy and save the new AvidISISClient MacOSX x.x.x.dmg file from the:
  - AvidISISClientInstallers folder in software kit to your Macintosh client system.
  - ▶ Management Console > Installer page to your Macintosh client system.
- 2. Double-click the AvidISISClient MacOSX x.x.x.dmg file.
- $3. \ \ Double\text{-click the AvidISISClient.mpkg file to run the installer. } \\$

Follow the on-screen instructions.



The installer replaces any earlier versions of the software.

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



You can manually copy the client installers to a USB flash drive.



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 Avid ISIS Linux client software:

- 1. Copy and save the new AvidISISClient el6.x86 x.x.x.bin file from the:
  - ▶ \AvidISISClientInstallers folder in software kit to the user's home directory of your Linux client system.
  - ▶ Management Console > Installer page to the user's home directory of your Linux client system.
- Open the Terminal application: Application > System Tools > Terminal on your Linux client.



When using the Terminal program, file names and paths are case sensitive.

- 3. Type **cd** [user's home directory] and press **Enter**.
- 4. Type chmod +x AvidISISClient el6.x86 x.x.x.bin and press Enter.
- 5. Do one of the following.
  - If you are not the root user, type sudo ./AvidISISClient\_el6.x86\_x.x.x.bin and press Enter. You will need to enter your password.
  - If you are the root user, type ./AvidISISClient\_el6.x86\_x.x.x.bin and press Enter.



The installer replaces any earlier versions of the software.



You can manually copy the client installers to a USB flash drive.

6. Restart the Linux client.

#### To uninstall Linux ISIS client software (and all of the dependencies):

• Open the Terminal application and type sudo /usr/sbin/avid-isis-uninstaller.



Do not uninstall ISIS Client Manager using the System > Administration > Add/Remove Program feature. This function does not completely remove all the ISIS Client Manager software.

## **Configuring Client Software**

#### To mount workspaces on the client do the following:

- 1. Load the client software as explained in "Loading Client Software" on page 19.
- 2. Do one of the following:
  - ▶ (Windows) If the Client Manager icon is not available in the Windows taskbar, select Start > Programs > Avid > ISIS Client > ISISClientManager.



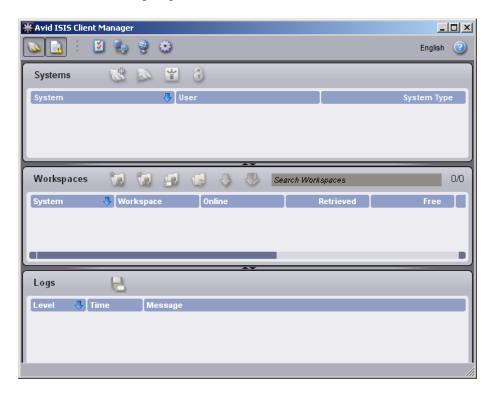
• (Windows) Click the Client Manager icon in the Windows taskbar.

- (Windows) Right-click the Client Manager icon and select Avid ISIS Client Manager.
- (Macintosh) Select Go > Applications, and then double-click the AvidISIS folder. In this folder, double-click the ISISClientManager.app file.
- ▶ (Linux) Click Applications > System Tools and select Avid ISIS Client Manager.



To add the Client Manager launcher icon to the panel or desktop when using a Linux client, click Applications > System Tools and right-click Avid ISIS Client Manager and select add launcher to panel or desktop.

The ISIS Client Manager opens.





3. (Option) If your ISIS client is connected to Zone 3, select the Remote Host (Avid ISIS system) the first time you log in. For more information see "Adding a Remote Host" on page 47.



The Client Manager user interface can take up to 30 seconds to display changes made in the Remote Host Settings.

- 4. Select the ISIS system in the Systems panel.
- 5. Click the Connect button in the Systems panel.

- 6. Log in using the Username and Password assigned to you by the Avid ISIS administrator. Do one of the following:
  - (Windows) Type your account name in the Username text box, and type your password in the Password text box.
  - (Windows) If your ISIS system is configured to use the Windows user name and password for your local system, select OS Login. By default, the Username and Password text boxes are inactive when you select this option.
    - (Optional Windows) If you used the OS Login option, and you want to connect to the network automatically every time you start your system, select the Auto-Connect checkbox.
  - (Macintosh) Type your Avid ISIS account name in the Username text box, and type your password in the Password text box.
  - ▶ (Linux) Type your Avid ISIS account name in the Username text box, and type your password in the Password text box.

When the connection is successful, workspaces you have been given access to are listed in the Workspaces list.

## **Macintosh Operating System**

Avid recommends a clean install of the Macintosh OS X (v10.9.x, v10.8.x, or 10.7.x) but an upgrade to your existing system is supported.



To use the ISIS Management Console, you need Adobe Flash Player installed on your system. Macintosh operating systems require the latest versions of Flash Player installed. Download the Flash Player at http://www.adobe.com.

## To install ISIS client software on your Macintosh 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, Mountain Lion, or Mavericks (see your Macintosh documentation).
- 3. Install the ISIS client software.

## 10 Gb Myricom Board Driver Macintosh v10.8.x and 10.9.x Clients

The Avid ISIS software kit includes the 10 Gb Myricom driver for Ethernet Macintosh v10.8.x and 10.9.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).

See "Installing the Myricom Network Adapter on Macintosh Clients" on page 15 for instructions on installing the 10 Gb adapter boards and the software. Once the Myricom 10 Gb adapter board is installed, upgrade the driver.

## **Updating Client Manager Software**

Before updating the Avid ISIS Client Manager software on your system, unmount any mounted workspaces and exit the Client Manager 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]:\AvidISISClientInstallers. You can also log into the Management Console and access the Installers link and download the appropriate client installer.

- For Windows clients, uninstall the ISIS client using Windows Control Panel, install ISIS client, and restart.
  - The ISIS installer splash screen includes a Windows client software installer. Selecting the "ISIS Windows Client" software package from the splash screen and clicking Apply, uninstalls the earlier version of the software without having to use the Windows Control Panel and installs the new software with a single click.
- For Linux clients, installing the new client software updates the previous version. Preferences are saved and you do not need to restart the client.
- For Macintosh clients, installing the new client software updates the previous version. Preferences are saved and you do not need to restart the client.
  - If you use the Safari browser to install the Avid ISIS software on a Macintosh client, note that the disk image is mounted as soon as the download is complete, and the installer starts automatically. Other browser applications do not automatically mount the disk image.



The Macintosh client software installs an Avid\_Uninstall folder. Use this folder only when you want all of the Avid client files removed; including the preference files.

After the software is successfully installed on your client, dismount the installer volume:

#### To dismount the Avid ISIS installer volume on a Macintosh client:

- 1. Locate the mounted volumes listed in the left pane of the Finder window.
- 2. Select the volume that contains "AvidISIS" in the name.
- 3. Do one of the following:
  - ▶ Right-click the volume and select eject.
  - ▶ Drag the volume to the Trash in the dock and it will eject.

## **Client Licensing**

Any client that connects to the Avid ISIS system is included in the Avid ISIS client count stored in the System Director License key. There is no need to order special licenses for each client. If you are not certain about your license status, see the *Avid ISIS ReadMe* for number of supported clients or your ISIS system administrator.

# **Configuring Network Profiles and Firewalls**

When enabled, some Firewall settings on Avid ISIS clients prevent you from connecting to the Avid ISIS environment. The following sections describe where the network profiles settings are located in the Client Manager software.



If you are not sure which Firewall profile to use with Windows clients, enable all three Profiles under Windows Firewall settings. This ensures that the ISIS clients work in all Firewall configurations.

## **Configuring Windows Network Profiles**

Network profiles are used by Windows Vista to distinguish between Public, Private, and Domain network connections. Because each network profile uses its own security settings, you must configure the Client Manager settings so that the appropriate ports are opened for each applicable network profile on your system.



You only need to configure Client Manager settings for the network profiles that are connected to your ISIS system. If you are unsure which network connections are used with your ISIS system, see your network administrator.

### To configure the Client Manager settings for Windows network profiles:

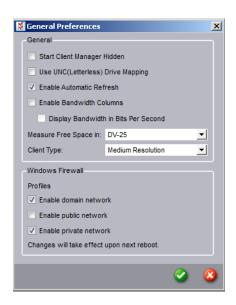
- 1. Verify which network connection profile(s) are used to connect to your ISIS system by doing the following:
  - a. Click Start > Control Panel.
    - The Windows Control Panel opens.
  - b. Click "Network and Internet."
    - The Network and Internet window opens.
  - c. Click "Network and Sharing Center."
    - The Network and Sharing Center window opens.

The Network and Sharing Center window lists the network connections present on your system and which network profile has been applied to them. The three possible network profiles are the following:

- Domain network
- Public network
- Private network

Once you have determined which network profile has been applied to the connection(s) to your ISIS system, you can go to the next step.

- 2. Open the Client Manager. (For information on opening the Client Manager, see "ISIS Shared Storage Network Connection" on page 42.)
- 3. Click the General Preferences button in the Client Manager window. The General Preferences dialog box opens.
  - Windows XP and Windows Storage Server 2003 clients do not have a Windows Firewall section in the General Preferences window.



4. In the Profiles section, click the checkbox next to each applicable network profile type to enable firewall configuration.



Enable firewall configuration only for the network profiles that are connected to your ISIS system.

5. Click the green check mark to apply the settings or the red X to close the dialog box without any changes.

## **Configuring the Windows XP Firewall**

The Windows XP Firewall is set by default. The Windows Firewall is part of the Security Center located in the Windows XP Control Panel. The Client Manager installer automatically configures the Windows Firewall to open the correct ports, but it is possible to have errors if the "Don't allow Exceptions" option is selected on the General tab of the Windows Firewall dialog box.

#### To make sure that the settings are correct when the firewall is enabled:

- 1. From the Windows Control Panel, open Security Center.
  The Windows Security Center window opens.
- 2. Click Windows Firewall.

The Windows Firewall dialog box opens.

- 3. Click the General tab, and select On (recommended). You can select Off (not recommended) if you do not want to enable the firewall.
- 4. Deselect "Don't allow exceptions."
- 5. Click OK.

## **Macintosh Support and Firewall**

You can use any of the onboard Ethernet ports on the Macintosh system to connect to the media network. For a list of supported Macintosh systems, see the *Avid ISIS ReadMe*.



See the documentation provided with your Macintosh system for the exact location of the *Ethernet port*.

Some Firewall settings on Macintosh clients prevent you from connecting to the Avid ISIS environment when enabled. You might receive an error message informing you that no System Directors were found and that the problem might be the Firewall settings.

## **Linux Firewall**

The Linux client installer configures the Linux Firewall settings for communication between the Linux clients and the System Director in the Avid ISIS environment.

# **Configuring the Client Network Properties**

Before you can connect your clients to the Avid ISIS network, you must configure the network properties on each client. If using the default Avid ISIS | 5500 - 5000 setup, you need to set a static IP address and subnet mask for the Ethernet port connection on every client.

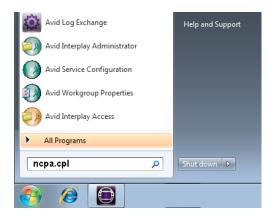


If your Avid ISIS network includes a DHCP server, clients can automatically obtain IP addresses. You only need to assign static IP addresses on your Ethernet clients if you do not have a DHCP server.

## Windows Client Network Properties (Other than Windows XP)

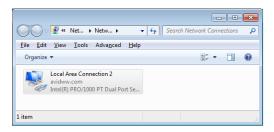
#### To configure the Ethernet port on your Windows clients:

1. Click Start and type ncpa.cpl in the Search text box.

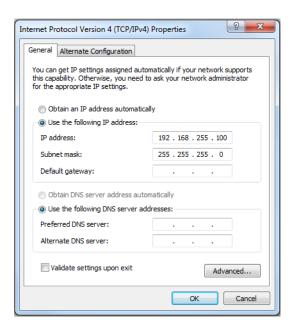


(On Windows 8, open the Search text box by pressing the Windows key on your keyboard and start typing on the Windows 8 desktop.)

2. Right-click the Local Area Connection and select Properties.



- 3. Select the Internet Protocol Version 4 (TCP/IP) option.
- 4. Click the Properties button. The Internet Protocol Version 4 (TCP/IP) Properties dialog box opens.

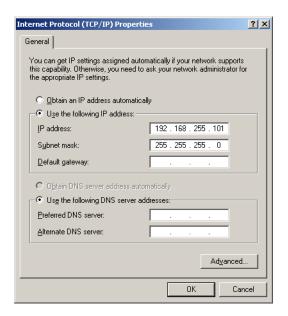


- 5. In the General tab, select the "Use the following IP address" option.
- 6. Type a unique IP address in the IP address text box, depending on your configuration:
  - ▶ For direct connect configurations, see the *Avid ISIS Setup Guide* or ask your Avid ISIS administrator.
  - ► For switch configurations, see the *Avid ISIS Setup Guide* or ask your Avid ISIS administrator.
- 7. Type the appropriate subnet mask in the Subnet mask text box.
- 8. (Optional) If connecting to a corporate network or outside the ISIS subnet, add the Default gateway and DNS server addresses.
  - See your corporate administrator for the Default gateway and DNS server addresses.
- 9. Click OK to close each of the open dialog boxes and save the changes.

## **Configuring Windows XP Client Network Properties**

#### To configure the Ethernet port on your Windows XP clients:

- 1. Right-click the Network icon on the desktop, and select Properties. The Network and Sharing Center window opens.
- 2. Right-click the Local Area Connection and select Properties.
- 3. Select the Internet Protocol (TCP/IP) option.
- 4. Click the Properties button. The Internet Protocol (TCP/IP) Properties dialog box opens.



- 5. In the General tab, select the "Use the following IP address" option.
- 6. Type a unique IP address in the IP address text box, depending on your configuration:
  - ▶ For direct connect configurations, see the *Avid ISIS Setup Guide* or ask your Avid ISIS administrator.
  - For switch configurations, see the *Avid ISIS Setup Guide* or ask your Avid ISIS administrator.
- 7. Type the appropriate subnet mask in the Subnet mask text box.
- 8. (Optional) If connecting to a corporate network or outside the ISIS subnet, add the Default gateway and DNS server addresses.
  - See your corporate administrator for the Default gateway and DNS server addresses.
- 9. Click OK to close each of the open dialog boxes and save the changes.
- 10. Close all the remaining open windows and dialog boxes.

## **Configuring Macintosh Client Network Properties**

#### To configure the Ethernet port on your Macintosh clients:

- 1. Click System Preferences in the Dock.
- 2. Click Network.
- 3. Select the Ethernet port in the left pane.

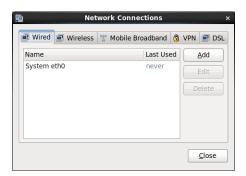


- 4. In the right pane select Manually from the Configure IPv4 menu.
- 5. Type a unique IP address in the IP address text box, depending on your configuration:
  - ▶ For direct connect configurations, see the *Avid ISIS Setup Guide* or ask your Avid ISIS administrator.
  - ▶ For switch configurations, see the *Avid ISIS Setup Guide* or ask your Avid ISIS administrator.
- 6. Type the appropriate subnet mask in the Subnet Mask text box.
- 7. (Optional) If connecting to a corporate network or outside the ISIS subnet, add the Default gateway and DNS server addresses.
  - See your corporate administrator for the Default gateway and DNS server addresses.
- 8. (Option) If this is a dual port configuration, repeat steps 3 through 7 to configure the second Intel Pro 1000 port.
- 9. Click Apply.

## **Configuring Linux Client Network Properties**

#### To configure the Ethernet port on your Linux clients:

1. Click System > Preferences > Network Connections.



- 2. Click the Wired tab (selected by default).
- 3. Select the network connection and click Edit.



- 4. Click the IPv4 Setting tab.
- 5. Select Manual from the Method menu.
- 6. Click Add.
- 7. Type a unique IP address in the IP address text box, depending on your configuration:
  - For direct connect configurations, see the *Avid ISIS Setup Guide* or ask your Avid ISIS administrator.

- For switch configurations, see the *Avid ISIS Setup Guide* or ask your Avid ISIS administrator.
- 8. Type the appropriate subnet mask in the Netmask text box.
- 9. (Optional) If connecting to a corporate network or outside the ISIS subnet, add the default gateway and DNS server addresses.
  - See your corporate administrator for the Default gateway and DNS server addresses.
- 10. (Option) If this is a dual port configuration, repeat steps 3 through 7 to configure the second Intel Pro 1000 port.
- 11. Click Apply.

#### 10 Gb Network Connections

The 10 Gb network adapter can connect directly into the 10 Gb port on the Avid ISIS | 5500 - 5000 Engine or the 10 Gb port on the switch. On Avid ISIS | 7500 - 7000 Engines with two ISS switches installed, two Avid ISIS clients with 10 Gb network adapters can be connected (one to each ISS) or the 10 Gb port on the switch. Clients with 10 Gb network adapters access to the Avid ISIS 2500 through a 10 Gb port on a switch.

If your client cannot connect directly to an Avid ISIS Engine, Avid has qualified several switches that provide 10 Gb connections. For information on qualified switches, see the *Avid ISIS ReadMe*.



For information on configuring the ISIS switches, see the Avid Network and Switch Guide in the documentation folder of the Avid ISIS software kit [drive]:\AvidISISDocumentation.

## **Configuring 10 Gb Client Connections**

Some client configurations might require that the 10 Gb network adapter is the only active network interface available to ISIS. If this is the case, you need to disable the other network interfaces, including the corporate uplink, in the Client Manager network preferences. Do not disable the NIC using the Windows OS.



Disabling a network card in the Client Manager Preferences makes the card unavailable only to Avid ISIS. It does not affect the card's functionality in the operating system or any other applications.

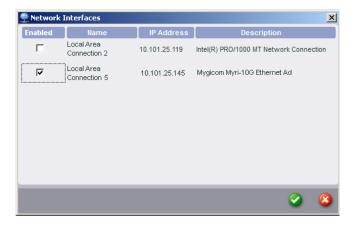
#### To ensure that the 10 Gb connection is the primary connection:

1. Start the Client Manager application.



- 2. Click the Network Interface Settings button from the toolbar of the Client Manager window.
- 3. Verify that the 10 Gb network adapter appears in the network interfaces list and that Enabled is selected.

The Network Interfaces dialog box opens.



4. Click the green check mark to apply the settings or the red X to close the dialog box without any changes.

## 10 Gb Client Resolution Settings

Avid ISIS editing clients with a 10 Gb network adapter installed should use the Ultra High Resolution setting in the Client Manager Preferences.

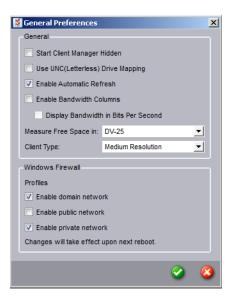


If using the 10 Gb network adapter in an Avid Interplay server for the Copy/Move Service, use the Medium Resolution setting.

#### To select the for the resolution preference:

1. Click the General Preference Settings button from the toolbar of the Client Manager window.

The General Preferences dialog box opens.



- 2. In the Client Type drop down, select "Ultra High Resolution."
- 3. Click the green check mark to apply the settings or the red X to close the dialog box without any changes.

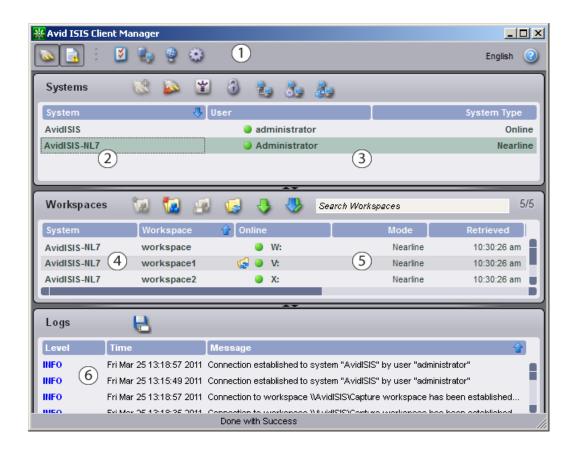
# 2 Using Avid ISIS Client Manager

Avid ISIS Client Manager allows your client to connect to the Avid ISIS shared storage network. When you install the Avid ISIS Client, the Client Manager runs in the background so you can mount and access your workspaces at any time, as well as manage your workspaces and bandwidth reservations. On Windows clients an icon appears in the System Tray in the lower right corner of your desktop. On Macintosh clients, an icon appears in the dock. When you open the application and log in, the Client Manager displays all available System Directors and all available workspaces.

The Client Manager allows users with the necessary account privileges to specify client bandwidth reservations, if any.

## **Client Manager Window**

The following illustration describes the sections of the Client Manager window.



- 1 Client Manager Tool bar change preferences or access help
- 2 Systems list lists all available and connected ISIS systems:
  - ISIS | 5500 5000 and ISIS | 7500 7000 systems are listed as "Online"
  - ISIS | 2500 2000 is listed as "Nearline"
- 3 System bandwidth area bandwidth settings (hidden by default), display setting is in the General Preference Setting dialog window
- 4 Workspaces list lists all workspaces available on connected ISIS systems
- Workspaces details area retrieves details about all available and/or mounted workspaces in the workspaces list
- 6 Messages area Log of information, warnings and error messages

## **Client Manager Buttons**

The following table describes the Client Manager buttons. You can also hold the cursor over the button and get a tool tip on the button function.



The visibility of these icons depends on other settings.

Button	Location	Function
6	Client Manager window toolbar	Toggles the "Systems" pane in the Client Manager window to display or be hidden
	Client Manager window toolbar	Toggles the "Logs" pane in the Client Manager window to display or be hidden
*	Client Manager window toolbar	Opens the General Preference Settings dialog box
	Client Manager window toolbar	Opens the Remote Hosts Settings dialog box
•	Client Manager window toolbar	Opens the Network Interfaces Settings dialog
	Client Manager window toolbar	Opens the Advanced Settings dialog

Button	Location	Function (Continued)
English	Client Manager window toolbar	Selects the country language displayed in the Client Manager window. The following languages are available.
		• Arabic
		• English
		• French
		• German
		• Italian
		• Japanese
		• Korean
		• Russian
		Simplified Chinese
		• Spanish
?	Client Manager window toolbar	Opens the Client Manager Help. Help is available in the language matching the language displayed.
	Systems toolbar	Connect to the selected ISIS systems
	Systems toolbar	Disconnect from the selected ISIS systems
*	Systems toolbar	Opens the Management Console for the selected systems
	Systems toolbar	Change password for the current user
7	Systems toolbar	Reserve Bandwidth
	Systems toolbar	Configure Reserve Rate

cation	Function (Continued)
tems toolbar	Toggle Auto Reservation
tems Login	Icon representing a client user
tems Login	Icon representing the client user has OS Login selected
tems Login	Icon representing the client user has Auto Connect selected
rkspaces toolbar	Mount Selected Workspaces
rkspaces toolbar	Unmount Selected Workspaces
rkspaces toolbar	Assign Mount Point to Selected Workspace
rkspaces toolbar	Toggle Auto Mount Workspaces
rkspaces toolbar	Retrieve Details for the mounted workspaces
rkspaces toolbar	Retrieve Details for all workspaces
	tems toolbar  tems Login  tems Login  tems Login  rkspaces toolbar  rkspaces toolbar  rkspaces toolbar  rkspaces toolbar

Button	Location	Function (Continued)
	Logs toolbar	Saves the messages displayed in the current Client Manager window, the default location is:
I		• (Windows) C:\Program Files\Avid\ISIS Client
		• (Macintosh) [Drive]:/Users/USERNAME
		Client Manager logs are automatically saved even when the Save Log Message button is not clicked. Logs are saved in the following location:
		<ul> <li>(Windows) C:\Users\USERNAME\AppData\Local\Avid\ISIS ClientManager\Logs</li> </ul>
		• (Macintosh) [ <i>Drive</i> ]:/Users/ <i>USERNAME</i> /Library/Application Support/Avid/ISISClientManager/Logs
\$	Advance settings and common in Client Manager windows	Clears the cache saved on the client system in the Advance Settings or clears the entry in dialog boxes
-	Common in Client Manager windows	Adds new entry to the dialog box
×	Common in Client Manager windows	Deletes the selected entry from the dialog box
	Common in Client Manager windows	Applies settings or changes made in the open dialog box
<b>(3)</b>	Common in Client Manager windows	Closes the open dialog box. Any changes that were not applied reverted back to the last saved settings

## **ISIS Shared Storage Network Connection**

The Client Manager software automatically checks for System Directors on the Avid ISIS shared storage network. ISIS  $\mid$  5500 - 5000 and ISIS  $\mid$  7500 - 7000 System Directors display as "Online" in the System Type column of the Client Manager, the ISIS  $\mid$  2500 - 2000 displays as "Nearline." Once the Client Manager software has been configured, the Client Manager can reconnect automatically when you restart your system.

If your system is a Zone 3 or a Zone 4 client, add the remote server IP address for your System Director. For more information, see "Adding a Remote Host" on page 47.

For information on Avid ISIS zone descriptions, see "Avid ISIS Client and Zone Descriptions" on page 47.

## **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 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.

## **Connecting to the ISIS Shared Storage Network**

If your system is connected to an Avid ISIS shared storage network, you can use the Client Manager to mount a workspace before you begin your work session.

#### To connect to the Avid ISIS network:

- 1. Do one of the following:
  - ▶ (Windows) If the Client Manager icon is not available in the Windows taskbar, select Start > All Programs > Avid > ISIS Client > ISIS Client Manager.
  - (Windows) Click the Client Manager icon in the Windows taskbar.
  - (Windows) Right-click the Client Manager icon and select Avid ISIS Client Manager.
  - ▶ (Macintosh) If the Client Manager alias icon is not available, select Go > Applications, and then double-click the AvidISIS folder. In this folder, double-click the ISISClientManager icon.
  - ▶ (Linux) If the Client Manager alias icon is not available, click Applications > System Tools and select Avid ISIS Client Manager.
- 2. Select the System Director you want to connect to from the Systems list.

  If this is the first time connecting, identify your System Director; see "Adding a Remote Host" on page 47.
- 3. Connect by doing one of the following:

- Click the Connect button.
- ▶ Right-click the System Director name and select Connect.
- ▶ Double-click the System Director name.
- 4. Log in by doing one of the following:
  - (Windows) Type your account name in the Username text box, and type your password in the Password text box.
  - ▶ (Windows) If your ISIS system is configured to use the Windows user name and password for your local system, select OS Login. By default, the Username and Password text boxes are inactive when you select this option.
  - ▶ (Macintosh) Type your ISIS account name in the Username text box, and type your password in the Password text box.
  - (Linux) Type your ISIS account name in the Username text box, and type your password in the Password text box.
- 5. Click Connect.

When the connection is successful, the Change Password and Launch Management Console buttons become active.

6. (Option) if you used the OS Login option, and you want to connect to the network automatically every time you start your system, select the Auto Connect box.

### Client Manager Tray Icon (Windows and Linux)

When the Client Manager is running, an icon appears in the system tray. The tray icon color indicates the client connection status:

lcon	Status
來	Client Manager is running, but there are no active ISIS connections.
*	Client is connected to one or more ISIS systems, but there are no mounted workspaces.
*	Client is connected to one or more ISIS systems, and there are one or more mounted workspaces.
*	Indicates a connection error.

If you hover the mouse cursor over the tray icon, a tooltip containing additional information appears:



#### **Changing Your Password**

You can use the Client Manager to change the password you use to log on to your Avid ISIS user account.



If your user name and password are different for your client system and your Avid ISIS account, your system cannot automatically reconnect to the media network when you restart your system.

#### To change your Avid ISIS account password:

- 1. Open the Client Manager (see "Connecting to the ISIS Shared Storage Network" on page 43).
- 2. Log into the ISIS system for which you want to change your password, if you are not already.
- 3. Click Change Password.

The Change Password dialog opens.



- 4. Type your existing password in the Old Password text box.
- 5. Type your new password in the New Password text box.



The Client Manager supports only ASCII characters in user passwords.

6. For confirmation, type the password again in the Confirm New Password text box.

7. Click the green check mark to apply the changes or click the red X to close the dialog box without any changes.

#### **Opening the ISIS Management Console from the Client Manager**

You can open the ISIS Management Console from the Client Manager window after you have connected to an ISIS system. From the Management Console login screen you can access the complete Management Console documentation using the Help link.

#### To open the ISIS Management Console:

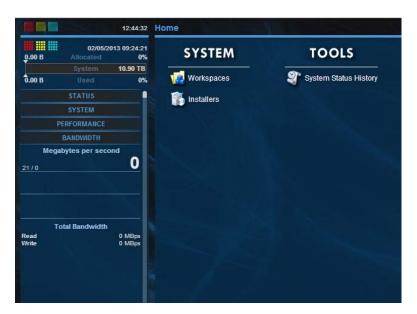


Select one or more systems in the Systems section of the Client Manager window and click the Management Console button.

Your default web browser opens to the ISIS Management Console login window.



The ISIS Management Console display might differ according to your user account's access privileges.



## **Avid ISIS Client and Zone Descriptions**

All clients in the media network are classified by zones, depending on how they connect to the network. The following list defines the clients in each network layer by its zone classification:

- Zone 1 Client Connected to ISIS VLANs via an ISIS | 7500 7000 ISS or ISIS | 5500 5000 System Director port (direct connect)
- Zone 2 Client Connected to ISIS VLANs via an Avid qualified layer-3 switch (non-routed)
- Zone 3 Client Connected to an Avid qualified layer-3 switch (routed) with known Quality
  of Service (QoS); traffic routed to ISIS (one hop) and load-balanced across ISIS VLANs
  (~60/40 ratio)
- Zone 4 Client Connected to the house network using an edge or a core switch with unknown QoS; traffic routed to Avid ISIS (measured by the number of hops) and load-balanced across ISIS VLANs (approximately a 60/40 ratio)



Clients supported in one zone can also run in any lower-numbered zone — for example, a Zone 3 client can also run as a Zone 2 or Zone 1 client.

Support for different client and device types vary by zone:

- Zone 1 AirSpeed playout, Transfer Manager
- Zone 2 AirSpeed ingest, editors, Interplay
- Zone 3 Instinct, Assist, certain editors
- Zone 4 Instinct, Assist; typical formats include DV25, MPEG-2 proxy (2 Mb/s)

## **Adding a Remote Host**

If your client is not on the same subnet as the ISIS shared storage network, you need to add the name of your System Director in order for the Client Manager to connect to it. If your system does not use a DNS server to configure your network connections, you can also type the IP addresses of the remote host, but you cannot use the virtual server name or virtual IP addresses.



Clients on the same subnet as the ISIS System Director, automatically have the System Director listed in the toolbar of the Client Manager window.

#### To add a remote host:

- 1. Open the Client Manager (see "ISIS Shared Storage Network Connection" on page 42). The Client Manager opens.
- 2. Click Remote Host Settings.

The Remote Hosts dialog box opens.



3. In the text box, type the actual server name or IP address of the Avid ISIS System Director to which you want to connect.

You cannot use the virtual server name or the virtual IP address of the remote host.

- 4. Click Add.
  - The Input dialog box opens.
- 5. In a Dual System Director configuration, enter both System Director names or IP addresses. You cannot use the virtual server name or the virtual IP address of the System Directors.
- 6. Click Add.



The Client Manager user interface can take up to 30 seconds to display changes made in the Remote Host Settings.

7. Click the green check mark to apply the settings or the red X to close the dialog box without any changes.

#### To remove a System Director from the Remote Hosts list:

▶ Select the System Director name and click Remove.

#### To remove all System Director names from the Remote Hosts list:

Click Clear.

## **Setting the Client Manager Display Properties**

Display properties in the Client Manager control how the application displays information on your local system.

#### To set Client Manager display properties:

- 1. Open the Client Manager. (For information on opening the Client Manager, see "ISIS Shared Storage Network Connection" on page 42.)
- 2. Click the General Preference Settings button from the toolbar of the Client Manager window.
- 3. In the General area, select the appropriate options:

Option	Description
Start Client Manager Hidden	(Windows and Linux) Allows the Client Manager to run hidden and accessible from the Client Manager icon in the taskbar. Deselect this option to open the Client Manager each time you start your system.
Use UNC (Letterless) Drive Mappings	(Windows) Use UNC paths to map workspaces instead of drive letters.
Enable Automatic Refresh	Automatically refreshes the data in the Systems and Workspace panels; for both Windows and Macintosh clients. This option is enabled by default.
Enable Bandwidth Columns	Displays the bandwidth buttons and columns in the Client Manager. Also enables some additional buttons, including the "Display Bandwidth in Bits Per Second" option.
Display Bandwidth in Bits Per Second	Displays bandwidth in bits per second. When deselected, the displayed bandwidth is in bytes per second.
Measure Free Space In	Displays the amount of available space in your workspace either in gigabytes (GB) or in the total length of stored media (hours:minutes:seconds) at a selected resolution.
Client Type	Selects a client type. For information on client types, see "Setting Client Types" on page 50.
<ul><li>Windows Firewall:</li><li>Enable domain network</li><li>Enable public network</li><li>Enable private network</li></ul>	(Windows) Enables the firewall profile configurations used in your ISIS shared storage network.

4. Click the green check mark to apply the settings or the red X to close the dialog box without any changes.

## **Setting Client Types**

Set your client type to match your network path capability:

Resolution Setting	Use with:
Low resolution	Interplay Assist Zone 4 (no QoS Guarantees using a less than optimal path)
	Avid editing systems using MPEG-2 resolutions.
Medium resolution (default)	All non-real time applications such as Copy/Move services (even with a 10 Gb connection), MPI Server, AirSpeeds, FTP transfers, and any third party transfer devices
	Avid editing systems using DV25/IMX30 resolutions
High resolution	$DNxHD^{\$}$ and uncompressed Standard Definition (SD) resolutions being used with a realtime editor
	Avid editing systems or Avid Interplay Assist using Avid DNxHD® resolutions like DNxHD 145/120 or DV50/IMX-50 or uncompressed Standard Definition
Ultra high resolution	Clients with dual 1 Gb connections, or a single or dual 10 Gb connection using the highest resolutions (DNxHD and uncompressed SD) on a realtime time editor
	Avid editing systems with 10 Gb Ethernet connections supporting clients editing in Uncompressed HD and multiple DNxHD/SD stream counts

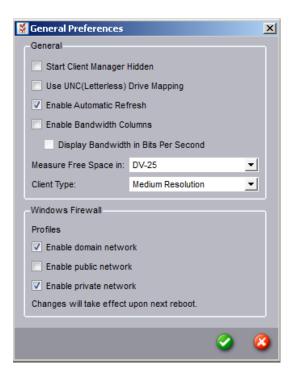
### To set a client type:

- 1. Open the Client Manager. (For information on opening the Client Manager, see "ISIS Shared Storage Network Connection" on page 42.)
- 2. Click the General Preference Settings button from the toolbar of the Client Manager window.

The General Preferences dialog box opens.



Windows XP clients do not have a Windows Firewall section in the General Preferences window.



- 3. In the General area, click the Client Type menu, and select the appropriate client type:
  - ▶ Low Resolution
  - ▶ Medium Resolution (default)
  - ▶ High Resolution
  - ▶ Ultra High Resolution
- 4. Click the green check mark to apply the settings or the red X to close the dialog box without any changes.

## **Enabling the Network Interface**

Only network interfaces involved with communicating with the ISIS system should be enabled.

#### To select the Network Interface:

- 1. Open the Client Manager. (For information on opening the Client Manager, see "ISIS Shared Storage Network Connection" on page 42.)
- 2. Click the Network Interface Settings button from the toolbar of the Client Manager window. The Network Interfaces dialog box opens.



- 3. Make sure your ISIS Ethernet network connection is selected.
- 4. Click the green check mark to apply the changes or click the red X to close the dialog box without any changes.

## **ISIS Connection Tests**

Before you begin using the Avid ISIS shared storage network, test the connection to your workspace to make sure communication between your client system and the media network is sufficient for the functionality needed by your system.

Use the Avid PathDiag tool, which installs with your client software, to test the read/write throughput, or the rate that read and write operations are conducted between your client system and a mounted workspace.

For a complete guide to using the Avid PathDiag tool, see "Avid PathDiag Tool" on page 63.

## Mounting and Unmounting Workspaces

Your Avid ISIS user account must have access to at least one workspace. For information on workspace access, see "Creating Client Accounts for Users" in the *Avid ISIS Administration Guide*.

When you have one or more workspaces mounted and the connection to the System Director is subsequently lost, a message appears in the Log pane of the Client Manager window. The Client Manager icon in the Taskbar changes color (for Windows systems).

The Client Manager then automatically attempts to reestablish the connection with the System Director. When the connection is successfully reestablished, a Log message informs you of the connection state.



Linux clients must always unmount workspaces before exiting Client Manager or your mount points could be different the next time you start the Client Manager and mount them. If you do not unmount the workspace, that workspace will appear as </mnt/workspace name1> in the Online column the next time you start the Client Manager. To correct the issue, you need to delete the /mnt/ <workspace name> directory on the client system.

For information on opening the Client Manager, see "Connecting to the ISIS Shared Storage Network" on page 43.

#### To mount an Avid ISIS workspace on your system:

1. Open the Client Manager.

The Workspaces list opens. The Online field displays a green ball for Workspaces that are already mounted. You can filter the Workspaces list by Workspace name.

- 2. Do one of the following:
  - ▶ Select a workspace and click the Mount button.
  - ▶ Right-click a workspace and select Mount.
  - ▶ Double-click the workspace.
  - (Option) Right-click, and select "Assign Mount Point" from the menu.



Selecting this option will override the current drive mapping option settings for the selected workspace. For more information on drive letter assignments, see "Configuring Workspace Mount Points" on page 55.

The Client Manager mounts the selected workspace on your client and the Online icon for the mounted workspace changes to green. (Windows) The Workspaces list displays the drive the workspace is mounted to. If you use letterless drive mappings, the Workspaces list displays "UNC path" next to the Online icon. (Macintosh) Displays the path to the mount point.

If you manage your lettered or UNC workspace mounts outside of the Client Manager application (for example, Map Network Drives) you can create multiple mount points to the same workspace. Client Manager will display the multiple mounts properly.

- 3. (Option) If you want the selected workspace remounted the next time you log in, do one of the following:
  - ▶ Select the workspace and click the Toggle Auto Mount button.
  - Right-click the workspace and select "Enable Auto Mount."

The next time you log in to your client system, the Client Manager automatically mounts the selected workspace.

#### To mount multiple Avid ISIS workspaces on your system:

1. Open the Client Manager.

The Workspaces list opens. The Online field displays a green ball for workspaces that are already mounted. You can filter the Workspaces list by Workspace name.

- 2. Do one of the following:
  - ▶ Select multiple non-contiguous workspaces with Control+click.
  - Select a range of contiguous workspaces by clicking on the first workspace row in the range, then Shift+clicking on the last.
  - Select all workspaces by right-clicking in the Workspaces list and selecting "Select All."
  - ▶ Select all workspaces by pressing Control+A.
- 3. Right-click, and select Mount.

The Client Manager mounts the selected workspaces on your client and the Online icons for the mounted workspaces change to green. The Workspaces list displays the drives the workspaces are mounted to. If you use letterless drive mappings, the Workspaces list displays "UNC path" next to the Online icons.

If you manage your lettered or UNC workspace mounts outside of the Client Manager application (for example, Map Network Drives) you can create multiple mount points to the same workspace. Client Manager will display the multiple mounts properly.

4. (Option) If you want the selected workspaces remounted the next time you log in, right-click, and select "Enable Auto Mount."

The next time you log in to your client system, the Client Manager will automatically mount the selected workspaces.

#### To unmount an Avid ISIS workspace on your system:

1. Open the Client Manager.

The Workspaces list opens. The Online field displays a green ball for workspaces that are already mounted. You can filter the Workspaces list by Workspace name.

- 2. Do one of the following:
  - ▶ Select a workspace and click the Unmount Selected Workspace button.
  - ▶ Right-click on the workspace and select Unmount.

The Client Manager unmounts the workspace from your client, and the green icon is removed from the Online field for this workspace.



When you exit the Client Manager you are offered the option of unmounting Workspaces.

#### To unmount multiple Avid ISIS workspaces on your system:

- 1. Make sure your Avid application is not running.
- 2. Open the Client Manager.

The Workspaces list opens. The Online field displays a green ball for workspaces that are already mounted. You can filter the Workspaces list by Workspace name.

- 3. Do one of the following:
  - ▶ Select multiple non-contiguous workspaces with Control+click.
  - ▶ Select a range of contiguous workspaces by clicking on the first workspace row in the range, then Shift+clicking on the last.
  - Select all workspaces by right-clicking in the Workspaces list and selecting "Select All."
  - ▶ Select all workspaces by pressing Control+A.
- 4. Click the Unmount Selected Workspace button or right-click and select Unmount.

The Client Manager unmounts the workspaces from your client, and the green icons are removed from the Online field for those workspaces.



When you exit the Client Manager you are offered the option of unmounting Workspaces.

### **Configuring Workspace Mount Points**

The Client Manager allows you to configure the drive letter used when mounting Avid ISIS workspaces. This allows you to prevent workspaces from being assigned drive letters you want reserved for other uses.



The Client Manager skips fixed drives and drive letters that are already in use.

If your system requires using Universal Naming Convention (UNC) paths for all mounted workspaces rather than drive letters, you can use Client Manager to set this as the default mapping for workspaces.

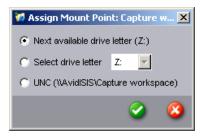
If you manage your lettered or UNC workspace mounts outside of the Client Manager application (for example, Map Network Drives) you can create multiple mount points to the same workspace. Client Manager will display the multiple mounts properly.

#### To configure the drive letter for mounting workspaces:

- 1. Open the Client Manager (see "Connecting to the ISIS Shared Storage Network" on page 43).
- 2. Select a workspace from the Workspace list.
- 3. Right-click the selected workspace, and select "Assign Mount Point" from the context menu. The Assign Mount Point dialog box opens.



The Macintosh and Linux dialogs are different, the UNC does not apply but you can select the default or manually entered mount point.



4. Click the Choose drive letter menu, and select the drive letter you want to use for mounting workspaces.

Option	Description
Next available drive letter (letter:)	Mounts the workspace to the next available drive letter, working backward from drive Z:
Select drive letter	Mounts the workspace to the selected available drive letter.
UNC (\\path)	(Windows) Uses a Universal Naming Convention (UNC) path for the mounted workspace instead of a drive letter.

5. Click the green check mark to apply the settings or the red X to close the dialog box without any changes.

## **Workspace Display**

The Workspaces list provides basic information about each workspace, including the following:

- All available workspaces
- Connection status (connected, not connected, automounted)
- Drive letter (Windows), UNC path, or Mount point for the mounted workspace
- Workspace name
- System Director name
- Workspace details retrieval time
- Free space in gigabytes (displayed units depend on the General Preference settings)
- Workspace total capacity in gigabytes
- Used space (as a percentage of available capacity)

- Protection type
- User privileges for the workspace (read, read/write)

## **Retrieving Workspace Details**

When you connect to an ISIS system, only the workspace names are displayed; you need to retrieve additional workspace details manually. You do not have to mount a workspace to retrieve its details.

#### To retrieve details for one or more selected workspaces:

- 1. Do one of the following:
  - ▶ Select a single workspace by clicking on a workspace row.
  - ▶ Select multiple non-contiguous workspaces with Control+click.
  - ▶ Select a range of contiguous workspaces by clicking on the first workspace row in the range, then Shift+clicking on the last.
- 2. Right-click in the Workspace list, and select Retrieve Details > Selected Workspaces.

Additional details are retrieved for the selected workspaces.

#### To retrieve details for all mounted workspaces:

- ▶ Do one of the following:
  - Click the Retrieve Details for Mounted Workspace(s) button
  - Right-click in the Workspace list, and select Retrieve Details > Mounted Workspaces.

Additional details are retrieved for all mounted workspaces.

#### To retrieve details for all workspaces:

- Do one of the following:
  - Click the Retrieve Details for All Workspaces button
  - Right-click in the Workspace list, and select Retrieve Details > All Workspaces.

Additional details are retrieved for all workspaces.

## **Sorting the Display**

If the Workspaces list contains a large number of workspaces, you might want to sort the items in the list.

#### To sort the Workspaces list:

1. Click on a field heading that you want to sort.

A blue arrow appears next to the field heading.

2. Click the field heading again to reverse the sort order.

## Filtering the Display

If the Workspaces list contains a large number of workspaces, you might want to filter the items in the list.

#### To filter the Workspaces list:

Type part or all of a workspace name in the "Search Workspaces" field.
The Workspaces list updates to display the workspace names that match the text entered.

#### To display all Workspaces:

Delete the text in the "Search Workspaces" field.
The Workspaces list updates to display all available Workspaces.

## **Accessing the Help**

The Client Manager Help provides background information for tasks, windows, and dialog boxes. The Help system is QT-based and opens in a separate windows.

#### To open the Client Manager help:

In the Menu panel, click the Help button.

## **Bandwidth Reservations**

You can use the Client Manager to obtain a default bandwidth reservation; however, the reservation cannot exceed your system's device limit or your client bandwidth limit, whichever is lower. The reserved bandwidth is the total bandwidth available to the client; the sum of both reads and writes. The Avid ISIS system enforces an effective bandwidth limit based on either the client type specified by the Client Manager or the reserved bandwidth value set in the Management Console. Your Avid ISIS administrator sets the bandwidth limits, and the bandwidth limit is listed in the Workspaces list. For more information on using the Management Console to set bandwidth limits, see the following topics in the *Avid ISIS Administration Guide*:

- Adding Users
- Adding Devices
- Configuring Management Console Preferences



Setting a bandwidth limit on editing clients can adversely affect playback performance. Avid recommends that you do not set bandwidth limits for users other than Avid AirSpeed® clients. However, your administrator might need to set a bandwidth limit for other devices, such as an Avid ISIS TransferManager, in the event the device is consuming more bandwidth than expected.

## **Enabling Bandwidth Reservations**

The Bandwidth dialog must be enabled in order to manage bandwidth reservations.

#### To enable the Bandwidth Dialog:

- 1. Open the Client Manager.
- 2. Click the General Preference Settings button.
- 3. Select "Enable Bandwidth Columns."
- 4. (Option) Select "Display Bandwidth in Bits Per Second" to display bandwidth in bits per second instead of megabytes per second.
- 5. Click the green check mark to apply the settings or the red X to close the dialog box without any changes.
  - The Bandwidth buttons appear in the Systems toolbar.
- 6. To set the Bandwidth (see "Creating or Releasing Bandwidth Reservations" on page 59).

## **Creating or Releasing Bandwidth Reservations**

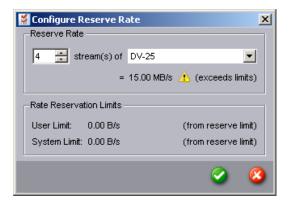
This procedure assumes that there are existing bandwidth reservations on the ISIS Management Console for the device (client system) or the users of the client system. On the client system, you can further restrict the bandwidth to less than the limit set on the ISIS.

#### To create or modify a bandwidth reservation:

1. Open the Client Manager and Enable Bandwidth Columns in the General Preference Settings (see "Enabling Bandwidth Reservations" on page 59).



Click the Configure Reserve Rate for Selected System(s) button.
 The Configure Reserve Rate dialog box opens.



- 3. Use the up/down buttons to select the number of streams you will need.
- 4. Select the type of stream from the list.

  There are several presets for various formats, as well as numeric bandwidth values.



If the selected bandwidth value exceeds the limits imposed either by the client type specified by the Client Manager or the reserved bandwidth value set in the Management Console, a warning symbol will appear next to the Total Rate value. You can save these values, but cannot create or modify an existing reservation.

- 5. Click the green check mark to apply the settings or the red X to close the dialog box without any changes.
- 6. Close the Configure Reserve Rate dialog.



7. Click the "Reserve bandwidth for selected System(s)" button.

You can enable Auto Reserve and create the reservation in one step by selecting "Toggle Auto Reservation for selected System(s)" instead of clicking Reserve.



8. (Option) If you want the reservation to be created automatically the next time you log in, click the "Toggle Auto Reservation for selected System(s)" button.

#### To release a reservation:

- 1. Select the System reservation you want to release.
- Click Reserve bandwidth for selected System(s).
   The selected reservation is released.

## **Administrative Tasks**

Review your logs and messages and clear cached data on a regular basis.

### **Clearing Cached Data**

The Client Manager maintains information on site settings in cache files, and the tool appends data each time you open the Client Manager. You can clear the cached information — for example, to remove settings for users no longer working on a specific system — by deleting the cache files.

#### To clear cached data:

- 1. Open the Client Manager. (For information on opening the Client Manager, see "ISIS Shared Storage Network Connection" on page 42.)
- 2. Click Advanced Settings.
- 3. In the Advanced section, do one of the following:
  - ▶ Click Clear for each cache file you want to clear.
  - ▶ Click Clear All to clear all cached data.
- 4. Click the red X to close the dialog box.

## **Managing Logs and Messages**

The Client Manager keeps a log of information, warnings, and error messages. You can view the current log in the Messages section of the Client Manager window. You can also save a copy of the log, and you can clear the log maintained for the current work session.



The Client Manager clears all logs when you exit the application.

#### To view Client Manager event logs:

1. Open the Client Manager. (For information on opening the Client Manager, see "ISIS Shared Storage Network Connection" on page 42.)

The Messages area is the bottom section of the Client Manager window. You can sort the Messages list by clicking the Level, Time, or Message field heading and clicking on the blue arrow to sort in ascending or descending order.

#### To save a copy of the event log:

- 1. Right-click in the list, and select Export.
  - The Export dialog box opens.
- 2. Navigate to the folder where you want to save your log.
- 3. Type a name for the log in the File Name text box.
- 4. Click Save.

The Client Manager saves the event messages as a log file (*filename*.log).

## To clear all event logs:

• Right-click in the list and select Clear.

# 3 Avid PathDiag Tool

Avid PathDiag tool is a diagnostic utility that allows you to validate your Avid ISIS storage group by quantifying the throughput of Windows or Macintosh editing applications accessing Avid ISIS workspaces. The Avid PathDiag tool can also test the throughput from local storage elements and any other shared storage to which a client has access.

## **Starting Avid PathDiag Tool**

#### To start Avid PathDiag tool, do one of the following:

- ▶ (Windows) Select Start > All Programs > Avid > ISIS Client > PathDiag.
- (Macintosh) Select Go > Applications, and then double-click the AvidISIS folder. In this folder, double-click the PathDiag icon.

The Avid PathDiag tool opens.



## **PathDiag Tool Interface**

The primary user interface of PathDiag tool consists of a single window from which you can select the test to be performed, start and stop the selected test, and view the test results as the test progresses. You access auxiliary controls through dialog boxes.



- 1 Settings area
- 2 Messages area
- 3 Results area
- 4 Control area
- 5 Start and Stop buttons
- 6 Test results graph
- 7 Zoom slider control

### **Settings Area**

The Settings area in the main window displays the name of the currently selected test, the test duration, and the path to the storage that will be tested.

The Setup button allows you to change the test settings. For more information, see "Diagnostic Tests" on page 68.

#### **Control Area**

The Control area in the main window has Start and Stop buttons along with test timing information. For more information, see "Starting and Stopping the Test" on page 75.

#### **Messages Area**

The Messages area provides test progress and diagnostic information about the operation of the utility. If you need to troubleshoot, the detailed text information in these messages might be helpful.

#### **Results Area**

The Results area provides the following numerical test results:

Item	Description
IOs	Displays the current number of I/O operations that have been completed during the test
Current Rate (MB/s)	Displays the calculated throughput or bandwidth (in megabytes per second [MB/s]) for recent I/O operations that have been completed
Average Rate (MB/s)	Displays the average throughput or bandwidth (in megabytes per second) for the duration of the test
Errors	Displays the number of errors encountered during testing. This is the total of all errors generated for both read and write operations and can include errors related to the following:
	Opening or closing data files
	Validity of the specified file system path
	User access privileges
	Read or write operations

Text indicators on the left of the Results area show the file access protocol used and the operation performed in the current phase of testing.

The File Access Protocol indicator shows one of the following:

Item	Description
Automatically Select	Selects a protocol automatically for testing the selected path. Generally, the tool selects Win32 File API for the specified path

Item	Description
Win32 File API	Indicates the Win32 file access API is being used. This indicator is displayed for local disks, mounted ISIS workspaces, and network file shares.
Self-Test	Indicates the performance monitor runs a test without actually performing any read or write operations. This is usually done to benchmark the tool without disk input/output actions affecting the results.

The I/O Operation indicator shows one of the following:

Item	Description
(Reading)	The current mode of testing is Read operations.
(Writing)	The current mode of testing is Write operations.

#### **Test Results Graph**

The Test Results graph plots results measured over time. It is particularly useful when you want to observe trends or patterns in performance.

For example, if another process is running that creates a periodic high demand on the storage subsystem being tested, you might see this as a periodic drop in observed throughput in the Test Results graph.

The Test Results graph shows the following:

Item	Description
Average Read or Average Write	The average throughput or bandwidth (in megabytes per second), plotted over time.
Recent Read or Recent Write	The calculated throughput or bandwidth (in megabytes per second) for recent I/O operations, plotted over time.
Peak Read or Peak Write MS/100	The peak latency for individual I/O operations (either reads or writes) that have been completed over a short period of time. A high measurement indicates a longer period of time was needed for the operation to complete.
	Because only the highest (peak) measurement over a short period of time is displayed, a single high peak could be accompanied by many low-latency operations that do not appear in the graph.



When you run the Network Connectivity test, the Test Results graph display is replaced with a table of results generated by the test. For more information, see "Setting Up a Network Connectivity Test" on page 73.

## **Diagnostic Tests**

The Settings area of the PathDiag tool displays the currently specified test parameters. Before running the test, you must mount at least one workspace in the Avid ISIS shared storage network.

## **Setting Up a Standard Test**

#### To change the default test settings:

1. Click the Setup button.

The PathDiag tool Settings dialog box opens.



2. Adjust the test parameters using the information provided in the following table, the ISIS Read/Write Test Name selection is recommended.

Parameter	Description		
Test Name	The following are predefined selections that perform either read or write testing at a bandwidth similar to that required for DV 25, DV 50, IMX 30, or low resolution operation.		
	• DV 25 Reads		
	• DV 25 Writes		
	• DV 50 Reads		
	• DV 50 Writes		
	• 4:1s Writes		
	• 10:1m Writes		
	• 14Z:1 Writes		
	• IMX 30 Reads		
	• IMX 30 Writes		
	• ISIS Read/Write (see the statement below this table)		
Path to Test	Select the path to the workspace you want to test, or type it in the text box.		
	This can be a UNC path (for example, \\myMachine\\myShareFolder\\subfolder\).		
Duration (Minutes)	Select the test duration (in minutes), or type a duration in the text box. The minimum test duration is 1 minute.		
Loop	Select the Loop option to repeat the test indefinitely. When you select this option, the test proceeds until you press the Stop button in the main utility window.		
	The Loop option causes true loop behavior: at the end of the specified duration, the test stops, intermediate test files that have been created are cleaned up, and then the test restarts using cleaned-up intermediate test files.		

The ISIS Read/Write test is a good standard test because it includes unlimited bandwidth used to ascertain the available performance of the end-to-end path. The following are typical results:

- Single 1 Gb connection produces an average of 96 MB/s
- Dual 1 Gb connection produces an average of 192 MB/s
- Single 10 Gb connection produces an average of 250 MB/s on writes and 350 MB/s on reads
- Dual 10 Gb connection produces an average of 500 MB/s on writes and 700 MB/s on reads

- 3. If necessary, specify paths and file names for optional test and error log files as follows:
  - a. Click Optional Log Files.

The Avid ISIS PathDiag Optional Log Files dialog box opens.



- b. If you want to log information about the test and its results, type a path name and a file name in the Log File text box, or click Browse to search for a file name.
- c. If you want to log error information, type a path name and a file name in the Error File text box, or click Browse to search for a file name.
  - If you do not want a log file, leave the Log File, Error File, or both text boxes blank.
- d. Click OK to close the dialog box.

# **Setting Up a Custom Test**

In addition to the standard, predefined tests, the PathDiag tool allows you to configure custom tests:

- To view the selection of standard tests, click Standard Tests in the PathDiag tool Settings dialog box.
- For 10 Gb connections, the recommended Transfer Size is 32768 with a Transfer Rate of unlimited.

### To access the custom test settings options:

1. Click Custom Test in the PathDiag tool Settings dialog box.

The dialog box expands to display the Custom Test Settings area.



2. Adjust the custom test parameters described in the following table, as required:

## Parameter Description

### File Access Method

PathDiag tool supports more than one interface or protocol for accessing data. This option allows you to control which interface is used. Choose one of the available settings:

- Automatically select PathDiag tool selects a protocol automatically for testing
  the selected path. Generally, the tool selects Win32 File API for the specified
  path.
- Win32 File API PathDiag tool uses the Win32 File API for its data file access.
- Network Connectivity Test PathDiag tool runs a high-level test to verify network connectivity. For more information on the network connectivity test, see "Setting Up a Network Connectivity Test" on page 73.
- Self-Test PathDiag tool runs a test without actually performing any read or
  write operations. This is usually done to benchmark the tool without disk
  input/output actions affecting the results.

#### Parameter

#### **Description (Continued)**

#### Reads vs Writes

PathDiag tool supports testing that focuses on Reads or Writes, or that alternates between Reads and Writes. Select a testing mode:

- Writes, then Reads The utility alternates between Write and Read tests.
   Approximately half of the test duration is allocated to reading, and the other half is allocated to writing.
- Writes Only The utility writes test data files and measures the throughput obtained during Write operations.
- Reads Only The utility reads test data files and measures the throughput obtained during Read operations.



One or more test data files are written as sample data for testing; however, the Writes required to set up the test are not included in the throughput measurements.

# Transfer Size (KB)

This option controls the amount of data the test utility attempts to read or write during a single I/O. Some software (like audio applications) uses smaller I/Os. Video applications use larger I/Os. Depending on the client application, you can select a typical I/O size for your application and run a PathDiag to see the results that you can expect from your client running that application.

In some cases, you might set the Transfer Size to large I/O sizes to test switch performance.

# Transfer Rate (KB/S)

The utility can attempt to perform I/O at a variety of fixed transfer rates. This is useful for simulating the behavior of applications that have a known data rate. You can select a data rate where I/Os do not exceed a particular limit.

A special unlimited transfer rate setting is also available. When you select the unlimited transfer rate, the PathDiag tool performs I/O operations as fast as possible while being affected by all aspects of the total system being exercised.

# Max File Size (MB)

This option controls the maximum size of test data files created for Reads or Writes. This option might affect throughput measurements. For example, at any given data rate, a smaller file is opened and closed more often than a larger file, creating more overhead. The default file size is 100 MB.

The Max File Size setting is very useful when creating custom PathDiag tests. If you use any of the default sizes on an ISIS | 5500 - 5000, you are doing I/O nearly 100% out of cache, rather than disk I/O. This is great in determining the health of your network, by taxing the network. If you want to test pure disk I/O throughput, run multiple instances of PathDiag using the largest supported file size of 2000 MB.

Parameter	Description (Continued)
Use named common file for Reads	This option changes the way that the Path to Test parameter is used, and the option is intended for advanced users only. When you select this option, the Path to Test parameter must specify a full path, including a file name. The test utility uses the named file for its Read tests.
	The utility creates the file if it does not exist and deletes it at the end of testing. For this reason, the named file should not already exist unless you want it to be deleted when the test is completed. With this option selected, you can run PathDiag tool on multiple clients simultaneously and supply the same file name.
	This allows PathDiag tool applications running on multiple clients to read a common file. (The file is created as needed, and the last PathDiag tool application to stop deletes the file.)

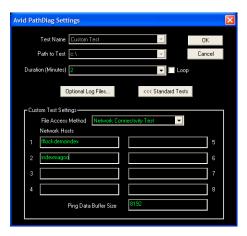
3. Click OK.

# **Setting Up a Network Connectivity Test**

The PathDiag tool provides a high-level verification of network connectivity when you select Network Connectivity Test as a custom test parameter. The Custom Test Settings area of the Avid ISIS PathDiag Settings dialog box allows you to list up to 8 network hosts to test. Results display in the Test Results graph area of the PathDiag tool.

### To set up the Network Connectivity Test:

- Click Custom Test in the PathDiag tool Settings dialog box.
   The dialog box expands to display the Custom Test Settings area.
- Select Network Connectivity Test from the File Access Method menu.The Network Hosts list displays the available systems in your network.



- 3. Type the host name or the IP address of the network system you want to test.
- 4. (Option) Set the Ping Data Buffer Size. The default buffer size is 8192 bytes, and the maximum buffer size is 64 KB.
- 5. Click OK.

When you run the Network Connectivity test, results display in the Test Results graph area of the PathDiag tool.



The following table describes the test results.

### **Network Connectivity Results**

Category	Description	
Source	The IP address of the client system	
Target	The host name and IP address of the target system	
Sent	The number of packets sent	
Recv	The number of packets received	
Lo RTT (ms)	The minimum round-trip time (in milliseconds)	
Hi RTT (ms)	The maximum round-trip time (in milliseconds)	
Avg RTT (ms)	The average round-trip time (in milliseconds)	

#### **Network Connectivity Results (Continued)**

Category	Description
Lo Hops	The minimum number of forwarding routers in the path between the source and the target system
Hi Hops	The maximum number of forwarding routers in the path between the source and the target system
Avg Hops	The average number of forwarding routers in the path between the source and the target system
% Lost	The percentage of the packet lost in the test

# **Starting and Stopping the Test**

You start and stop the currently configured test using the Start and Stop buttons.

#### To start the currently configured test:

▶ Click Start in the PathDiag tool main window.

The test runs for the specified duration and then stops automatically. The elapsed time a test has been running and the remaining time are displayed in the Control area. If you selected the Loop option in the PathDiag tool Settings dialog box, the test runs indefinitely. In this case, the word LOOP appears in the Time Remaining display in the main window.

#### To stop the currently running test:

Click Stop in the PathDiag tool main window.

# **Test Results**

This section provides information to help you interpret test results displayed in the PathDiag tool main window.

#### **Average Rate Calculation**

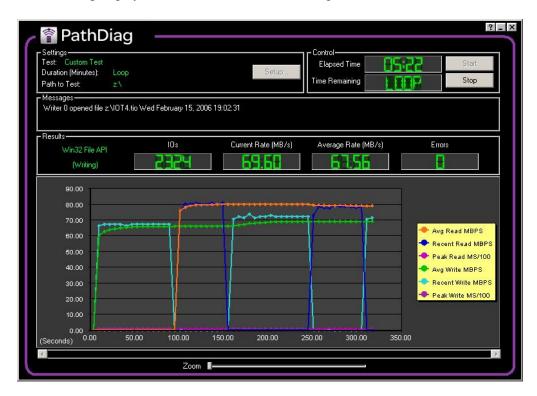
The average data rate is calculated over the duration of the test. This calculation includes the time the utility requires to open and to close the test files, so the test file size (which you can configure for custom tests) can affect the overall measured throughput.

Also, if the throughput is slow as the test is starting, this might be reflected in the average rate. For example, if the target bandwidth is 4.0 MB/s, the actual average rate calculated at the conclusion of the test might be 3.98 or 3.99 MB/s.

### **Performance Graph**

The graph of results over time can help experienced users obtain information about system performance.

The following display is a normal unlimited read/write profile for an ISIS client.



### Look for the following:

Trends: Does the system perform at a consistent rate over time? Is there an upward or
downward trend in performance measured over time? If you notice a trend, it might be
helpful to perform testing over a longer period of time to determine if the trend continues
over longer durations or if a recurring pattern emerges.

It is normal for the maximum read bandwidth to be greater than the maximum write bandwidth.

- Patterns: Is there a momentary drop in performance that occurs at consistent or varied
  intervals? Patterns can emerge as a result of implementation details and the configuration of
  a particular system (for example, caching strategies or physical memory), or they might
  indicate a load on a system that is occurring periodically.
- Changes in performance as load varies: What occurs when a subsystem is placed under a load by other users (or PathDiag tool is running on another client)? It might be easier to observe these interactions by inspecting the plot of performance results over time.

### **Measurement Strategy**

Throughput measurements are plotted periodically (approximately every 5 seconds) and represent a snapshot of performance at the time of the plot. This limits the amount of data that is plotted, which otherwise could include a very large number of data points. As a result, the performance graph could miss a momentary drop or increase or a peak in performance that occurs between plot points. The average rate calculation reflects the impact of such a dip or spike, even if the actual size of a momentary variation does not appear in the graph.

#### **Test Result Interpretation**

If your results fall below optimal performance, check to see if your bandwidth is limited. You can use the Avid ISIS Management Console to check your user bandwidth in the Users list in the Users dialog box (see "User Descriptions" in the *Avid ISIS Administration Guide*) and your device bandwidth in the Device list in the Device dialog box (see "Device Descriptions" in the *Avid ISIS Administration Guide*). If your bandwidth requirements are greater than the reservations set in the Management Console, your Avid ISIS administrator can adjust the limits.

These results represent guidelines for Avid-qualified systems; performance on your system might vary.

# 4 Data Migration Utility

The Data Migration Utility copies data from workspaces between an Avid MediaNetwork infrastructure and an ISIS infrastructure, or (as of the ISIS v4.5 release) between two ISIS infrastructures. You use Ethernet connections between the client and both Avid ISIS systems, or a Fibre Channel connection between the Avid MediaNetwork and the client.

You can use the Data Migration utility to copy data between any combination of ISIS | 7500 - 7000, ISIS | 5500 - 5000, and ISIS | 2500 - 2000 workspaces (this includes mirrored, RAID 5, RAID 6, HW Raid, SW Raid, and unprotected workspaces).



When you copy data from an ISIS | 5500 - 5000 or an ISIS | 2500 - 2000 system to an ISIS | 7500 - 7000 system, the utility automatically creates mirrored workspaces on the ISIS | 7500 - 7000 by default. After the data has been copied, you can change the protection type if you want.

# **Data Migration Between Avid Storage Networks**

A Data Migration Utility is included with Avid ISIS software kit for copying data from Avid MediaNetwork v5.1.3 and v4.2.4 infrastructures to the Avid ISIS infrastructures, or between ISIS infrastructures. Data Migration software is not supported in MediaNetwork v4.1.6 and older infrastructures.

ISIS clients can be directly connected to the ISIS systems or through an ISIS switch. As you copy the selected Workspaces from one shared storage infrastructure to the other, the utility creates Workspaces with the same name on the targeted ISIS infrastructure automatically. A progress bar is displayed to monitor the status of your migrations.



Do not migrate data from the same workspace with multiple clients at the same time.

#### **Data Migration clients requirement:**

- 1. Update your Windows or Macintosh client to the appropriate Avid MediaNetwork and Avid ISIS client software versions.
- 2. Connect your shared storage network cables:
  - Avid Unity MediaNetwork client Fibre Channel connection to the Avid Unity MediaNetwork.

- ▶ ISIS Windows client to the Intel Pro 1000 PT network adapter on your Windows client.
- ▶ ISIS Macintosh client to the built-in Ethernet port on your Macintosh client.
- 3. Load the ISIS client software and any updates required for the release.
- 4. Load the Avid Data Migration software, see "Installing the Data Migration Utility" on page 80.

# **Operating Systems Qualified for Data Migration from MediaNetwork**

The following lists the client operating systems that have been qualified for data migration from Avid MediaNetwork to Avid ISIS.

- Windows 7 (64-bit) with SP 1
- Windows Vista (64-bit) with SP 2
- Windows XP (32-bit) with Service Pack (SP) 3
- Windows 2008 R2 (64-bit)
- Mac OSX-Lion v10.6.5, v10.7.x, and Mountain Lion v10.8.x



Starting with the v4.5 release, data migration between two ISIS systems is supported with any of the currently supported client operating systems. See the latest ReadMe for a list of supported client operating systems for ISIS.

## **Macintosh Client Requirements for MediaNetwork**

Data Migration has been qualified on Mac OS with Avid MediaNetwork v5.3.3 or later and Avid ISIS v3.2 or later. Make an Ethernet connection to the ISIS 5000 v3.2 or Avid ISIS 7000 v2.4 and later infrastructures, and a Fibre Channel connection to your Avid MediaNetwork v5.1.3 or v4.2.4 infrastructures. Using the Data Migration Utility clients can copy data files from the Avid MediaNetwork to ISIS infrastructures.

## Windows Client Requirements for MediaNetwork

Data Migration has been qualified on Windows clients with Avid MediaNetwork v5.4 or later and Avid ISIS | 5500 - 5000 v3.2 or later. An Ethernet connection is made to the Avid ISIS 5500 | 5000 v3.2 or Avid ISIS | 7500 - 7000 v2.4 and later infrastructures, and a Fibre Channel connection to your Avid MediaNetwork v5.1.3 or v4.2.4 infrastructures. Using the Data Migration Utility clients can copy data files from the Avid MediaNetwork to ISIS infrastructures.



Dual connected clients are supported only with the ATTO FC-41ES network adapter in supported Windows client systems and slots. The ATTO FC-41XS and FC-41EL Fibre Channel network adapters, and Windows client systems not listed are not supported.

# **Installing the Data Migration Utility**

#### To install the Data Migration Utility:

- 1. Load the Avid ISIS client software and any updates required for the release.
- 2. Restart the ISIS client.
- 3. Load the Avid Data Migration software. The Avid Data Migration software can be found in the Avid ISIS software installer kit in the following location \AvidISISUtilities\ISIS Data Migration Utility\ folder. Double-click the appropriate installer and follow the prompts.
  - ▶ Windows 32-bit clients AvidISISDataMigrationUtility\_Win32.msi
    The Windows software is loaded in the following location: \Program
    Files\Avid\Data Migration Utility.
  - ▶ Windows 64-bit clients AvidISISDataMigrationUtility\_Win64.msi
    The Windows software is loaded in the following location: \Program
    Files\Avid\Data Migration Utility.
  - ▶ Macintosh clients AvidISISDataMigrationUtility\_MacOSX.dmg

    The Macintosh software is loaded in the following location: /Applications/Avid/
    Data Migration Utility.
- 4. Log into your ISIS Management Console and create a new Storage Group for the new Workspaces getting copied from your MediaNetwork shared storage environment.



There must be a Storage Group created on your ISIS system before you start the Data Migration Utility.

# **Logging Into the Data Migration Utility**

The Data Migration Utility login requires the Administrator password for both your MediaNetwork and your ISIS storage shared storage networks.



The Data Migration Utility is for copying data from the Avid Unity MediaNetwork to Avid ISIS and between ISIS shared storage networks. This utility does not copy data from ISIS to the MediaNetwork.

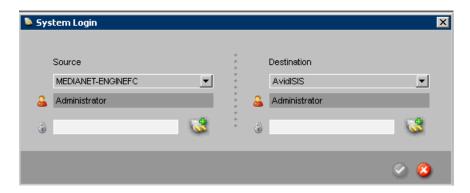
#### To connect to the Avid ISIS network:

- 1. Load the Data Migration software (see "Installing the Data Migration Utility" on page 80).
- 2. Click Start > Programs > Avid > Data Migration Utility, and select Data Migration Utility.

The System Login Dialog box for both the MediaNetwork and the ISIS shared storage systems opens.



The system shown in the Source list varies depending on whether the source is a MediaNetwork or another ISIS system.



- 3. Log in using your Administrator account (Administrator is already entered):
  - a. Type your MediaNetwork Administrator password in the Source text boxes.



- b. Click Connect or press Enter.
- c. Type your ISIS Administrator password in the Destination text boxes.
- d. Click Connect or press Enter.
- 4. Click the green check mark to log in or click red X to close the utility.

# **Data Migration Window**

The following illustration describes the sections of the Data Migration Utility window.



- Data Migration toolbar contains buttons for connecting or disconnecting to the shared storage environments, hiding the Verify and Copy Data and Transfer Queue panels, and opening the Transfer Preferences and Help dialog boxes.
- 2 Selection area for selecting the MediaNetwork workspaces to be copied to the ISIS.
- 3 Storage Group area lists the workspaces, total amount of data to be copied, and estimated amount of transfer time. The name of the destination Storage Group is listed and whether there is enough unallocated space in the Storage Group for the selected Workspaces to be copied.
- Workspace area lists the Workspace names, their destination, amount of data and estimated amount of time to be copy each Workspace, and position of the Workspace in the transfer queue.
- 5 Data Migration button Starts the file coping after you have selected the Workspaces to copy and Storage Group destination. This button is not active if the destination Storage Group is not large enough.
- 6 Transfer Queue area provides you with the ability to view the transfer progress, pause or cancel the transfer, and view logs of the transferred and failed files

# **Data Migration Buttons**

The following table describes the Data Migration Utility buttons. You can also hold the cursor over the button and get a tool tip on the button function.

Button	Location	Function
	System Login dialog box	Opens the System Login dialog box to connect to both shared storage systems
	Data Migration window toolbar	Disconnect from both shared storage systems
	Data Migration window toolbar	Toggles the "Transfer Queue" panel in the Data Migration window to display or be hidden. The Transfer Queue shows the data migration logs which includes a list of files that have been transferred and any files that might have failed the transfer.
	Data Migration window toolbar	Toggles the "Select Workspaces" and "Verify and Copy Data" panels in the Data Migration window to display or be hidden. The Select Workspaces panel lists all the Workspaces and Allocation Groups or Storage Groups in both the MediaNetwork and ISIS systems.
*	Data Migration window toolbar	Opens the Transfer Preferences dialog box
?	Data Migration window toolbar	Opens the Client Manager Help. The Client Manager Help includes information on the Data Migration Utility.
<del>-</del>	Select Workspaces toolbar	Selects all the MediaNetwork Workspaces to be copied
×	Select Workspaces toolbar	Deselects all selected MediaNetwork Workspaces
No.	Select Workspaces toolbar	Refresh all the data; in both the MediaNetwork and ISIS Storage Groups
	Select Workspaces toolbar	Refreshes the display to show the number of new files on the source MediaNetwork Workspace since the time of the last migration.
<b>A</b>	Verify and Copy Data toolbar	Data Migration button starts the copy from MediaNetwork to ISIS. This button is disabled if the amount of data in the source is greater than destination capacity.

Button	Location	Function (Continued)
\$	Transfer Queue toolbar	Clears the Transfer Queue panel of Completed, Failed and Canceled transfers. This button does not clear Active, Pending and Paused transfers.
	Transfer Queue toolbar	Pauses the process of the data being copied. Press the Pause button again to continue the copy.
×	Transfer Queue toolbar	Cancels the selected transfers
<b>3</b>	Transfer Queue toolbar	Opens log file displaying the files that have, and have not transferred successfully
	Transfer Preferences dialog box	Applies settings or changes made in the open dialog box
<b>(3)</b>	Transfer Preferences dialog box	Closes the open dialog box. Any changes that were not applied reverted back to the last saved settings

# **Running the Data Migration Utility**

After installing the Data Migration Utility and logging in as previously described. The following procedure describes how to copy your data from the MediaNetwork to the ISIS. When you select the Workspaces to copy on the source system, and a Storage Group on the ISIS, the utility automatically creates Workspaces on the ISIS system with the same names as the Workspaces used in the source environment. If the capacity of ISIS Storage Group does not have enough space, the Data Migration button (used to start the copy) does not become active.

Once you have started coping files, you can pause and continue the copy at any time. If you cancel the copy operation, any files already copied to the ISIS can be used.



You do not need to mount Workspaces using the MediaNetwork Fibre Manager or the ISIS Client Manager to use the Data Migration Utility.

### To copy data:

- 1. Open the Data Migration Utility. (See "Logging Into the Data Migration Utility" on page 80.)
- 2. Select one or multiple Workspaces in the Select Workspaces list.
- 3. Choose your destination Storage Group on the ISIS.



The ISIS Storage Group must be already available before you start the Data Migration Utility.





4. Click Start Migration button to begin migration.

This button is disabled if there is not enough space in the destination Storage Group or you have not selected all of the required parameters. If the connection is lost, the disconnection event displays in the Transfer Log.

Status bars show progress in Transfer Queue.



5. (Option) Check the logs regarding transfer result.

#### To stop a transfer:



▶ Select one or more transfers in the queue and click Cancel.

If no transfers are selected, this button is disabled.

### To view the files that have not been copied:

1. Select the Workspace.



2. Click New File Refresh.

The New Files column lists the number of new files in the selected Workspace not previously transferred.

# **Transfer Preferences**

You can set the following options in the Transfer Preferences dialog box.

- Preserve file and directory timestamps When checked the timestamps associated with the files and directories are copied to the ISIS system. If unchecked the current date is used.
- Overwrite existing files If there are existing files with the same name as the files being copied, the existing file is overwritten with the file being copied. If Workspaces or folders already exist, files are added to those existing Workspaces and folders.

- Overwrite files even if timestamps are the same This setting is available when "Overwrite existing files" is checked. Files are overwritten regardless of the date on the timestamp.
- Overwrite read-only This setting is available when "Overwrite existing files" is checked. Files are overwritten even if the file is read-only.

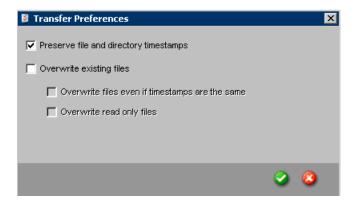
#### To set the Transfer Preferences:

1. Open the Data Migration Utility. (See "Logging Into the Data Migration Utility" on page 80.)

The Data Migration Utility opens.



2. Click the Transfer Preference button in the Data Migration Utility window. The Transfer Preferences dialog box opens.



- 3. Select your preferences.
- 4. Click the green check mark to apply the settings or the red X to close the dialog box without any changes.

# Transfer Queue and Logs

The Data Migration Utility keeps a log of Files Transferred and Files Failed. You can view the current log in the Transfer Queue section of the Data Migration Utility window. The log file is automatically deleted and a new one is started every time you open the Data Migration Utility. You can save a copy of the log or the log for the current work session.



The Data Migration Utility clears all logs when you exit the application.

#### To view data in the Transfer Queue:

1. Open the Data Migration Utility. (See "Logging Into the Data Migration Utility" on page 80.)



If the Transfer Queue area is not displayed, click the show Transfer Queue button to display the panel.

The Transfer Queue area is the bottom section of the Data Migration Utility window. You can sort the list in the window by clicking the headings at the top of the Transfer Queue panel. Click the blue arrow to sort the Workspace field in ascending or descending order.

### To save a copy of the Data Migration Utility log:



- Click in the Transfer Log file button.
   The Log file opens in your text editor.
- 2. Navigate to the folder where you want to save the log.
- 3. Type a name for the file and save it.

### To clear transferred file data in the Transfer Queue panel:



Click Clear.

This clears any finished transfers (those that have been canceled, failed, or completed). Any pending or paused transfers remain in the queue.

# 5 ISIS Log Utility

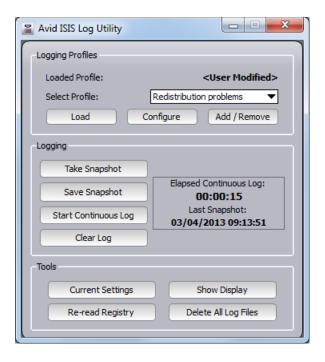
The ISIS Log Utility used by Avid Customer Support shows the logging information of the ISIS client connection. This utility is installed with the ISIS client software and is used to diagnose client issues. This updated utility has a common user interface for Windows, Macintosh, and Linux clients.

- You can load predefined profiles (based on common troubleshooting scenarios) that use trace filters to gather data.
- The Log Utility automatically compresses and timestamps continuous logs.
- After you "Take Snapshot" of the loaded Profile results, you can save the snapshot to a file.
- Through the counseling of Avid Customer Support, you can also add specific Profiles to the list.

# Running the ISIS Log Utility

### 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.
  - ▶ (Linux) Click Application > System Tools > ISIS Log Utility.



- 2. Based symptoms the client is experiencing, select a profile from the Select Profile menu:
  - Default Use this profile if you are unsure of which profile to use. These logs capture general ISIS client problems.
  - Client Hang Capture these logs if the ISIS client stops functioning and you want to see if the unexplained client failure is associated to ISIS functions. This should be used if the editor stops while capturing, playing, consolidating, or transcoding to an ISIS Workspace. Many of these failures could be an issue with the editor.
  - File or Workspace Access Capture these logs if the ISIS client cannot mount Workspaces, access files within a workspace, or received errors when accessing Workspace files.
  - I/O Timeouts Capture these logs if the ISIS editing client displays "semaphore timeout" messages, "delayed write failures," or dropping frames while working with media on a Workspace.
  - Redistribution Problems Capture these logs if the ISIS client is experiencing errors, displaying messages, or dropping frame while the ISIS system is in the process of a redistribution. Although client performance is expected to drop during and an ISIS redistribution, these problems would be under light ISIS loads and low resolutions.

#### 3. Click Load.

The 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. If you click Take Snapshot, click Save Snapshot to save the snapshot to a file.

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

- Windows 7, Windows 8 (and 8.1), Windows 2008 servers and Windows 2012 servers
   C:\Users\<username>\ISISLogUtility
- Windows XP and Windows 2003 servers C:\Documents and Settings\<username>\ISISLogUtility
- Macintosh OSX /Users/<username>/ISISLogUtility
- Linux /home/<username>/ISISLogUtility
- 6. Click "Show Display" or "Save Snapshot" to view or save the results.

# **Changing Settings**

The recommended default settings are saved in each Profile. You should not change the predefined settings unless instructed to by Avid Customer Support.

### To change ISIS Log Utility test settings:

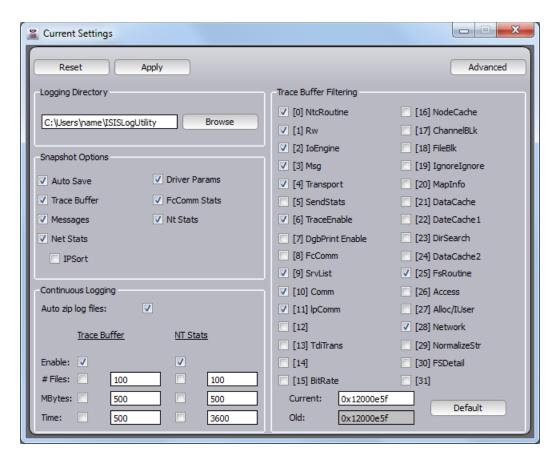
- 1. Do one of the following to start the ISIS log Utility:
  - ▶ (Windows) Click Start > Programs > Avid > ISIS Client > ISIS Log Utility.
  - ▶ (Macintosh) From the Finder, click the Go menu and select Application > AvidISIS > ISISLogUtility.app.
  - ▶ (Linux) Click Application > System Tools > ISIS Log Utility.
- 2. Select a profile from the Select Profile menu.
- 3. Click Load.

The configuration for the selected Profile is loaded.



To view the test configuration that was loaded, click the Configure button.

4. Click "Current Settings" in the Tools section to change settings in the configuration.



- 5. Select or deselect the changes you want in the Snapshot Options, Trace Buffer Filtering, and Continuous Logging sections of the window.
- 6. Click the Browse button to define where you want the log files to be saved or type in the new path.
- 7. Click Apply to save your changes and have them loaded in the test configuration. Click Reset to return all the options and path back to the original defaults.
- 8. Close the window.
- 9. Run the utility: see "Running the ISIS Log Utility" on page 88.

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