Avid Unity™ MediaNet

File Manager Setup Guide

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Using This Guide

Congratulations on your purchase of an Avid Unity™ MediaNet workgroup or Trilligent™ Cluster. You can use your MediaNet workgroup to share media files and other project data among up to 24 Fibre Channel attached clients and up to 60 Ethernet clients across four PortServer Pro systems.

Consult Avid Technology Product Marketing for other possible Ethernet client configurations.

For Macintosh-based products—Media Composer®, Film Composer®, Media Station XL, Avid Xpress®, and Pro Tools® for Macintosh® systems.

For Windows-based products—Avid Symphony™, Media Composer, Film Composer, Avid Xpress for Windows NT® or Windows® 2000 systems, NewsCutter, and NewsCutter XP.

Creating a Trilligent Cluster allows you to connect up to 20 Trilligent MediaServers to deliver streaming media and other high-bandwidth content over the Internet.

Your MediaNet workgroup or Trilligent Cluster might not contain all of the components or features described in the documentation. Avid's documentation describes all components and features of the configuration you purchased.

Who Should Use This Guide

This guide is intended for those responsible for installing, configuring, or maintaining a MediaNet workgroup or Trilligent Cluster. It provides installation and configuration information specific to the MediaNet and Trilligent hardware and software.

About This Guide

This guide provides complete task-oriented procedural instructions for setting up a MediaNet workgroup with a Trilligent Cluster.

The Contents provide a complete listing of all the topics in this book:

- Chapter 1, "Preinstallation Overview," provides information on the components, unpacking, rack layout, network connection necessary to complete the installation, and configuration of the MediaNet environment.

- Chapter 2, "Installing the MediaNet Storage Subsystem Hardware," provides step-by-step instructions for connecting the File Manager and storage subsystem hardware.

- Chapter 3, "Configuring the MEDIASwitches," provides step-by-step instructions for configuring and installing the necessary software for the MEDIASwitches.

- Chapter 4, "Configuring the File Manager," provides step-by-step instructions for configuring and installing the necessary software for the File Managers.

- Chapter 5, "Installing the MediaNet Software," provides step-by-step instructions for installing the various software components that are part of the File Manager and MEDIASwitch.

- Chapter 6, "Installing the Trilligent File Manager Software," provides step-by-step instructions for installing the various software components that are part of the File Manager, and the MEDIASwitch.

- Appendix A, "File Manager and Storage Specifications," lists the dimensions and weight, and the environmental, power, and power cord specifications for the components that are part of a MediaNet/Trilligent Cluster environment.

- Appendix B, "Installing UPS Monitoring Software," provides information for installing and configuring the UPS monitoring software on the File Manager.

- Appendix C, "Regulatory and Safety Notices," lists regulatory and safety notices for the MediaNet and Trilligent hardware.

You'll also need the Avid Unity MediaNet Management Guide *to create a file system, to create allocation groups and workspaces for media files, and to create a system user account.*

Symbols and Conventions

Unless noted otherwise, the material in this document applies to the Windows NT operating system, the operating software for the File Manager.

This guide uses the following special symbols and conventions:

1. Numbered lists, when the order of the items is important.

    a. Alphabetical lists, when the order of secondary items is important.

- Bulleted lists, when the order of the items is unimportant.

    - Indented dashed lists, when the order of secondary items is unimportant.

▶ One arrow indicates a single-step procedure. Multiple arrows in a list indicate that you perform one of the actions listed.

`Courier Bold` font identifies text that you type.

Look here in the margin
for tips.

In the margin, you will find tips that help you perform tasks more easily and efficiently.

A note provides important related information, reminders, recommendations, and strong suggestions.

A caution means that a specific action you take could cause harm to your computer or cause you to lose data.

If You Need Help

If you are having trouble using your MediaNet or Trilligent environment, you should:

1. Retry the action, carefully following the instructions given for that task in this guide.

2. Check the documentation that came with your hardware for maintenance or hardware-related issues.

3. Check the release notes supplied with your Avid application for information on accessing the Avid Web site and the Avid Knowledge Center.

4. For support services, call Avid Customer Support:

    - Broadcast products — call 800-NEWS-DNG (639-7364).

    - Post-production products — call 800-800-AVID (2843).

    - Trilligent products — call 800-800-AVID.

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Avid Technology continuously seeks to improve its documentation. We value your comments about this guide and other Avid-supplied documentation.

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Please include the title of the document, its part number, revision, and the specific section you are commenting on in all correspondence.

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To order additional copies of this documentation from within the United States, call Avid Telesales at 800-949-AVID (2843). If you are placing an order from outside the United States, contact your local Avid representative.

Related Information

The following documents provide more information about the MediaNet workgroup, the MediaNet client, and other storage options:

- *Avid Unity MediaNet Site Preparation Guide*

- *Avid Unity MediaNet File Manager Setup Guide*

- *Avid Unity MediaNet Upgrade Notes*

- *Avid Unity MediaNet System Overview*

- *Avid Unity MediaNet Management Guide*

- *Avid Unity MediaNet Troubleshooting Guide*

- *Avid Unity MediaNet Macintosh Fibre Channel Client Setup Guide*

- *Avid Unity MediaNet Macintosh Fibre Channel Client Quick Start Card*

- *Avid Unity MediaNet Windows Fibre Channel Client Setup Guide*

- *Avid Unity MediaNet Windows Fibre Channel Client Quick Start Card*

- *Avid Unity MediaNet Macintosh Ethernet Client Setup Guide*

- *Avid Unity MediaNet Macintosh Ethernet Client Quick Start Card*

- *Avid Unity MediaNet Windows Ethernet Client Setup Guide*

- *Avid Unity MediaNet Windows Ethernet Client Quick Start Card*

- *Avid Unity MediaNet Release Notes*

The most recent update of the *Avid Products Collaboration Guide* is available in the Documentation section of the Avid Customer Service Knowledge Center. To access the Avid Customer Service Knowledge Center, click the Avid Customer Service link at www.avid.com and select Knowledge Center.

CHAPTER 1

Preinstallation Overview

This guide provides instructions for installing and configuring MediaNet Storage workgroup and Trilligent Cluster components.

Before You Begin

Keep the shipping boxes that come with your MediaNet environment. You might need to repackage and ship the components in the future.

Before you begin to install the File Manager and storage, do the following:

- Unpack all the components.

- Check the contents of each kit against the list shipped with the order to confirm you have received all the components.

- Examine all of the components for damage and contact Avid Customer Support if you notice any problems.

- Ensure that you have obtained a dedicated (static) IP address and host name for each of the following components in your MediaNet/Trilligent environment:

  - The File Manager

  - The backup File Manager, if you have a failover configuration

  - Each MEDIASwitch (2 maximum)

  - Each MediaNet Fibre attached client (24 maximum)

- Each Port Server

- Each MediaNet Ethernet client (maximum 60)

- Each Media Server (20 maximum) (Trilligent Cluster)

- The routing network switch (Trilligent Cluster)

- The load-balancing network switch (Trilligent Cluster)

- If you have a load-balancing network switch, a virtual IP address for the cluster (Trilligent Cluster)

Alternately, you can use the nonrouting IP addresses presented throughout this manual to configure the network for the File Manager and MEDIASwitches.

The IP addresses should be supplied to you (based on your input) by Trilligent Customer Support on a Configuration Sheet.

MediaNet and Trilligent Cluster Components

A MediaNet workgroup allows you to connect the latest in shared storage environments to your Avid workstations. The shared storage lets you set up a collaborative user environment where several editors can work on a project at the same time using the same video and audio files.

The Trilligent Cluster is a streaming media environment that consists of the Trilligent Storage subsystem and the Trilligent Media Server subsystem. The following sections describe the components that make up each of these subsystems.

The MediaNet and Trilligent components are supplied ready to mount in any standard 19-inch NEMA or EIA rack. The racks are used to mount the File Manager, the storage, the MEDIASwitch, the Media Servers, network switches, the uninterruptible power supplies (UPSs), and other components.

The Storage Subsystem

The storage subsystem provides high-capacity, expandable Fibre Channel shared storage and consists of:

- One to eight rack-mount MEDIArray™ II drive enclosures

📑 *Avid supports a maximum of 100 drives in a data drive set. Using eight MEDIArray II drive enclosures allows for the maximum number of data drives. Raw state drives can fill any unpopulated drive slots in the drive enclosure.*

- Computer rack (optional)

- One or more UPSs (optional)

- One or two rack-mount MEDIASwitches (8-port or 16-port)

- One or two rack-mount File Managers. (For more information about failover configurations with two File Managers, see "File Manager Failover Configurations" on page 1-4.)

- One standard keyboard, monitor, and mouse, or one optional pull-out keyboard, monitor, and mouse (KMM) assembly

- One rack-mount keyboard, video, and mouse (KVM) switch (optional)

- One 10BASE-T/100BASE-T Ethernet hub (Trilligent)

The Media Server Subsystem for a Trilligent Cluster

The Trilligent Cluster Media Server subsystem provides high-throughput media streaming capabilities and consists of:

- One to twenty Media Servers

- One 100BASE-T or gigabit Ethernet load-balancing network switch

- One 100BASE-T or gigabit Ethernet routing network switch

> **▤** *Not all Media Server subsystem components in your installation are necessarily supplied by Avid. In your installation, you might be providing one or more components yourself.*

When you are expanding an existing MediaNet workgroup or Trilligent Cluster, you can order MEDIArray II drive enclosures and Media Servers separately. You can add them to the existing environment, providing you do not exceed the environmental limits. For more information on environmental limits see, "Component Layout Recommendations" on page 1-5.

File Manager Failover Configurations

If properly configured with a redundant File Manager, the MediaNet workgroup or Trilligent Cluster supports automatic failover to a second (Failover) File Manager in the event that the active (Primary) File Manager fails. This ensures that the File Manager is not a single point of failure in your environment.

Communication through the first three drives in the drive set, as well as polling over two cross-connected Ethernet paths, ensures that any lack of response from the initially active File Manager is because it has gone offline, and is not due to a failure of the network connections between the two File Managers.

> **▤** *In a failover configuration, neither File Manager is assigned to a primary or backup role — the first system to come online becomes the Primary File Manager and the second to come online becomes the Failover File Manager. If both systems come online at the same time, the active role is negotiated arbitrarily between the two File Managers. For this reason, Avid recommends that you physically label and refer to your first and second File Managers as FM1 and FM2 (or use a similar convention).*

Component Layout Recommendations

You might be installing MediaNet workgroup or Trilligent Cluster components into either a single rack or into multiple racks (two or three racks depending on the configuration). The network switches might need to be placed in their own rack. Plan the rack layout using the general guidelines in the following sections.

Single-Rack Layout

Use the following guidelines to help you determine your single-rack layout.

- Install the pull-out keyboard, monitor, and mouse (KMM) assembly approximately 40 inches from the floor.

- Install the heaviest components at the bottom of the rack (UPSs and drive enclosures):

    - Five to six drive enclosures with no UPSs

    - Three to four drive enclosures with one UPS

- Install the MEDIASwitches above the KMM.

- Install the keyboard, video, and mouse (KVM) switch above the MEDIASwitches.

- Install the Media Servers (Trilligent only) above the KVM.

- Install the File Manager and backup File Manager above the Media Servers.

- Install the servers for other Avid integrated applications above the File Manager.

- Install the load-balancing network switch (Trilligent only) at the top of the rack.

Multiple-Rack Layout

Use the following guidelines to help you determine your rack layout.

- Install up to eight drive enclosures in one rack.

- Install the pull-out keyboard, video, and mouse approximately 40 inches from the floor in the second rack.

- Install the Media Servers (Trilligent only) in the lower portion of the next rack, a maximum of 20 2U Media Servers.

- Install the MEDIASwitches above the KMM.

- Install the KVM switch above the KMM.

- Install the File Manager and backup File Manager at the bottom of the second rack.

- Install the servers for other Avid integrated applications above the File Manager.

- Install the load-balancing network switch (Trilligent only) at the top of the rack.

- If included, install the network switch (layer 2) below the load-balancing network switch.

CHAPTER 2

Installing the MediaNet Storage Subsystem Hardware

This chapter describes how to install and connect the File Manager and other MediaNet workgroup hardware.

⚠ **Before you start the procedures in this chapter, you should already be familiar with the preinstallation information in Chapter 1.**

Installing Rack-Mount Rails and Brackets

All MediaNet rack-mount components are supplied with either mounting rails or brackets. You should follow the manufacturer's installation instructions supplied with each component to correctly attach the rails or brackets to the rack rails.

📑 *Where necessary, this guide supplies specific rack-mount rail or bracket installation instructions. These instructions supersede the manufacturer's instructions.*

Installing File Managers and Storage Subsystem Components

The File Manager and storage are placed into a rack for easy access to the cables, connectors, and drives. The following installation process places the various components into the rack from bottom to top.

Uninterruptible Power Supply

Avid recommends that you use an uninterruptible power source to help protect the data in your MediaNet workgroup. You should have an adequate uninterruptible power source to support these items:

- The File Manager

- The failover File Manager

- All of the MEDIArray II drive enclosures

- The MEDIASwitches

- The keyboard, monitor, and mouse assembly

- The keyboard, video, and mouse switch

You can supply the uninterruptible power source as conditioned power for your computer room or as several uninterruptible power supplies (UPSs). If you choose uninterruptible power supplies, you can acquire them or purchase them from Avid. Avid supplies the Best Power™ Fortress 2250 UPS with the CheckUPS® II software.

You should also use power monitoring software to control the UPSs and shut down the File Manager properly in the event of an extended power outage. This helps to protect the integrity of your data.

If your environment does not use UPSs, continue with "Installing the MEDIArray II Drive Enclosures" on page 2-3.

Installing the MEDIArray II Drive Enclosures

The MEDIArray II drive enclosures hold the MEDIArray II drives. Install the drive enclosures starting at the bottom of the rack.

Installing the MEDIArray II Drive Enclosure Rack-Mount Rails

The rack-mount MEDIArray II drive enclosure can be installed in either a NEMA or an EIA rack. Follow the instructions supplied with the drive enclosure to install the rack-mount rails, while ensuring that:

- You select the lowest full U-alignment position in the rack where you can mount the drive enclosure. The drive enclosure uses 3 U, or 5.25 inches of rack space. Position the drive enclosure support rails so the bottom of each rail is at the baseline of a U-alignment position (see Figure 2-1).

- The rails do not interfere with the power strips, power cords, or other cables at the back of the rack.

- The rails allow the drive enclosure to slide completely into the rack.

- The bottom of the drive enclosure is at the bottom of a U-alignment position.
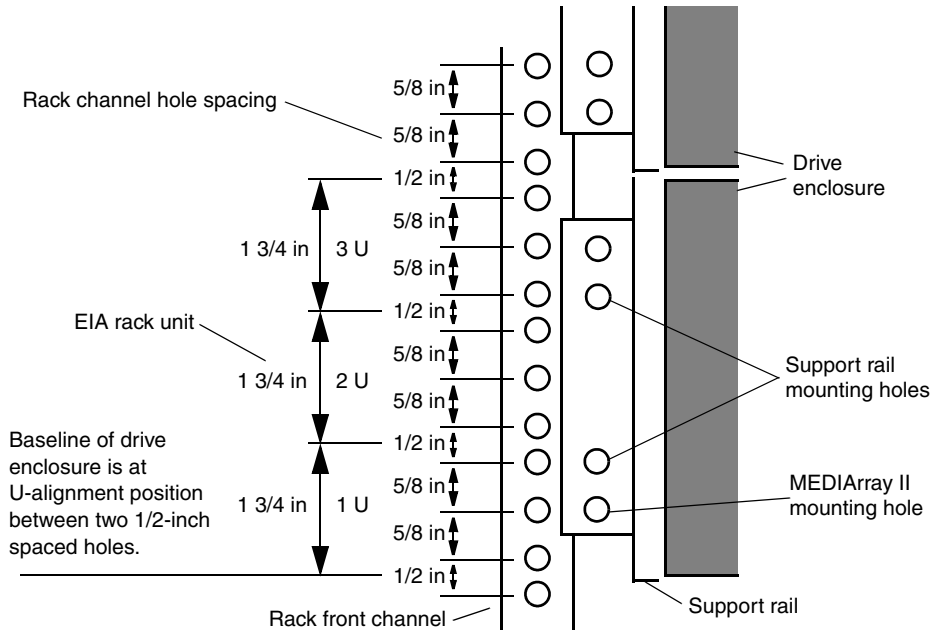
Figure 2-1   Locating the MEDIArray II Drive Enclosure Rails

📝 *If you are installing the rails in a rack that does not have threaded holes, you will also need to locate four clip nuts in the rail kit. Slip the clip nuts over the holes in the rack front and back channels where you will be installing the screws for the drive enclosure rails.*

Mounting the MEDIArray II Drive Enclosure

To place a rack-mount drive enclosure into the rack:

1. Make sure you have installed the rack-mount drive enclosure support rails (see "Installing the MEDIArray II Drive Enclosure Rack-Mount Rails" on page 2-3). If you are installing several drive enclosures, install all the support rails *before* you begin to install the drive enclosures.

For installing multiple MEDIArray II Drive Enclosures, make sure you position the next set of support rails approximately 3 U above the bottom of the previous set of support rails. The holes in the rails should align so you can use the top or bottom holes.

2. From the front of the rack, slide a drive enclosure onto the bottom set of support rails. Push the drive enclosure in until the mounting brackets on the side of the drive enclosure touch the rack front rail (see Figure 2-2).

Mounting Brackets
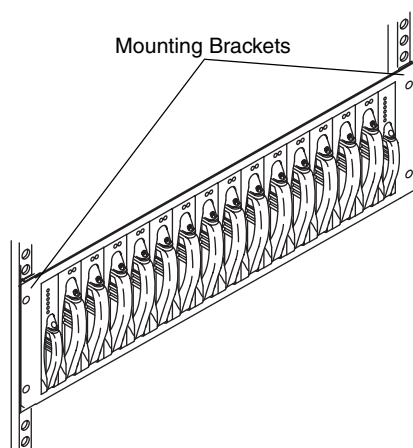
Figure 2-2   Installing a Drive Enclosure

3. Locate mounting screws in the rail kit.

4. Attach the drive enclosure to the rack front rail using one mounting screw on each side of the drive enclosure. The mounting screw can go into either the top or the bottom hole in the mounting bracket.

5. If you are installing several rack-mount drive enclosures, repeat steps 2 to 4 for each additional drive enclosure.

Connecting the MEDIArray II Drive Enclosure Power Cords

Each MEDIArray II drive enclosure has two power cords, one for each power supply. The power cord connectors are located on the back panel below the Advanced Cooling Modules (ACMs).

To connect the power cords to the power supplies in a drive enclosure:

1. Locate two power cords in the MEDIArray II kit.

2. Attach one power cord to the power connector in the right power supply.

3. Attach the other power cord to the power connector in the left power supply.

4. Check that the drive enclosure power switches are on.

By default, each drive enclosure ships with the power switch in the on position. Check the power switches to make sure they are on.

5. Plug the power cords from the right side of each drive enclosure into a power strip on the right side of the rack.

6. Plug the power cords from the left side of each drive enclosure into a power strip on the left side of the rack.

7. Repeat steps 1 to 6 for each drive enclosure.

Installing the MEDIArray II Drives

The MEDIArray II ships with the power supplies and ACMs installed. However, you must install the MEDIArray II drives *before* you connect the cables between the Fibre Channel controller, the MEDIArray II and the power cords. The drive slots are filled with dummy drives. You will need to remove some or all of the dummy drives and replace them with MEDIArray II drives. The MEDIArray II drives are shipped separately from the drive enclosure and must be installed in the drive enclosure.

⚠ **Make sure you are wearing a grounding wrist strap and that it is attached to the rack assembly before you remove or add any drives in the drive enclosure.**

📋 *Avid recommends that you not mix different capacity MEDIArray II drives in the same drive enclosure. Mount different drive sizes in separate drive enclosures.*

To install the drives:

1. Starting with the first unpopulated slot, remove as many dummy drives as you have drives in the MEDIArray II drive kit. Using your finger, release the locking tab by pressing down, and pull the cam lever towards you until the cam lever is fully open (see Figure 2-3).

📋 *Save the dummy drives. You might need to reinstall some of them at a later time if you rearrange the drives in your drive enclosures.*

⚠ **If you are not filling the drive enclosure with 14 drives, leave the dummy drives in any unused slots to provide proper airflow within the drive enclosure.**
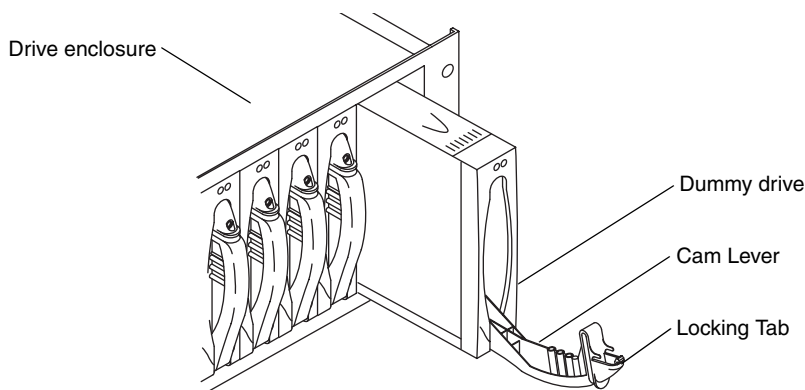
Figure 2-3   Removing a Dummy Drive from the Drive Enclosure

2. Gently pull the dummy drive out of the enclosure.

3. Locate a drive in the MEDIArray II drive kit.

4. Remove the drive from the antistatic bag.

⚠ **Use caution when you are handling the drives. They contain components that can be damaged if you hit or drop the drive.**

5. Grasp the drive assembly, and fully open the cam lever.

6. Align the drive assembly with the guides in the drive enclosure, making sure the LEDs are on the top (see Figure 2-4).
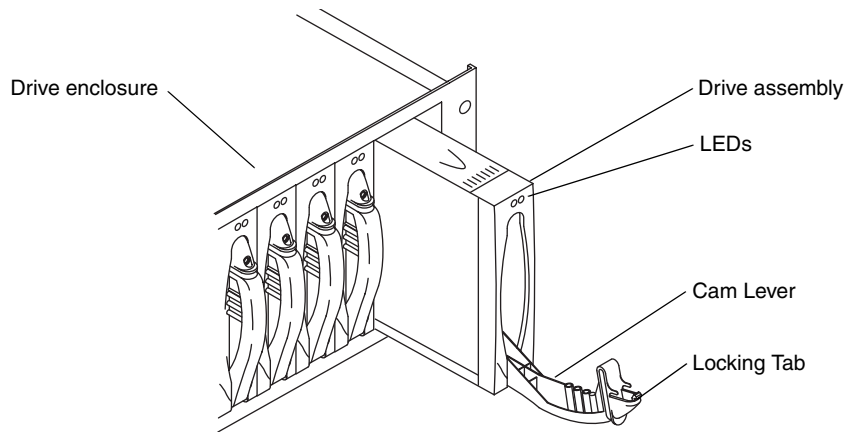
Figure 2-4   Inserting a Drive into the Drive Enclosure

7. With the cam lever fully open, gently slide the drive into the drive enclosure. To lock the drive assembly in place, lift the cam lever from the lowered position upward. You should hear the locking tab "click" when it engages.

⚠ **Use caution when inserting the drives into the drive enclosure. The protective strip mounted to one side of the drive can be damaged if not inserted properly.**

8. Repeat steps 1 to 7 for each drive you are installing into the drive enclosure.

Setting the MEDIArray II Drive Enclosure IDs

Each MEDIArray II drive enclosure needs a unique enclosure ID number to identify the drive enclosure and determine its drive addresses. The enclosure IDs must be between zero and seven (0 and 7), and the IDs *must* be in sequential order.

To set the drive enclosure IDs:

1. Locate the enclosure ID switch on the drive enclosure rear panel.

2. Use the + (plus) button to increment the drive enclosure ID or the – (minus) button to decrement the drive enclosure ID (see Figure 2-5).

3. Starting with the drive enclosure that is *physically lowest* in the rack, set the ID to 0.

You might need to use a pen or a paper clip to push the + and – buttons to change the drive enclosure ID.

Enclosure ID switch

Decrement - (minus) button

Increment + (plus) button
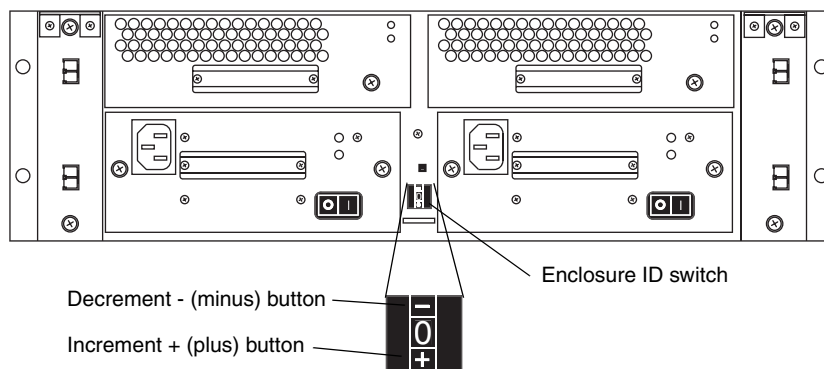
Figure 2-5   Setting the Drive Enclosure ID

4. Move up to the next drive enclosure and set the ID to 1.

5. Continue setting the drive enclosure IDs by moving up to the next drive enclosure and incrementing the ID number by one from the previous enclosure's ID number.

6. Repeat step 5 until all of the drive enclosure IDs are set. The last ID number should be no higher than 7.

Installing a Standard Keyboard, Monitor, and Mouse

The File Manager ships with a keyboard and mouse. You need to supply a monitor and a monitor shelf before you can connect the monitor to the File Manager. You can provide your own monitor and shelf, or purchase them from Avid.

If you purchased a keyboard, monitor, and mouse assembly, skip the following instructions and continue with "Installing the Keyboard, Monitor, and Mouse (KMM) Assembly(Optional)" on page 2-11.

Installing the Shelf

Follow the instructions supplied with the shelf to install it while ensuring that:

- The shelf does not interfere with the power strips, power cords, or other cables at the back of the rack.

- The shelf allows the monitor to slide completely into the rack.

- You install the rails at the nearest U-alignment position.

- The bottom of the shelf is at the bottom of a U-alignment position.

Installing the Monitor

To install the monitor, set the monitor on the shelf. Route the power cord and cable to the back of the shelf.

Connecting the Monitor Power Cord

To connect the monitor power cord:

1. Plug the power cord into the back of the monitor.

2. Plug the power cord into the right power strip in the back of the rack.

Installing the Keyboard, Monitor, and Mouse (KMM) Assembly(Optional)

The keyboard, monitor, and mouse is a rack-mount assembly that includes a standard keyboard, liquid crystal monitor, and trackball. It requires 1 U of rack space. The monitor pivots and folds flat so that the KMM can slide into the rack for storage when not in use.

The KMM is an option for the MediaNet workgroup. If your workgroup does not include the KMM, you will need to use a standard PC keyboard, PS/2 mouse, and monitor. Follow the instructions in "Installing a Standard Keyboard, Monitor, and Mouse" on page 2-10 to install your keyboard, monitor, and mouse.

Installing the KMM Rack-Mount Rails

Follow the instructions supplied with the KMM to install the rack-mount rails while ensuring that:

- The rails do not interfere with the power strips, power cords, or other cables at the back of the rack.

- The rails allow the KMM to slide completely into the rack.

- The rails are installed at the nearest U-alignment position that is approximately 40-inches from the floor.

- The bottom of the KMM is at the bottom of a U-alignment position.

Mounting the KMM on the Rack-Mount Rails

To mount the KMM on the rack-mount rails:

1. Align the fixed rails attached to the sides of the KMM with the sliding rails attached to the rack.

2. Push the KMM onto the sliding rails and into the rack. You will hear the rails click as they lock in place.

3. Carefully pull the KMM out of the rack. Make sure that the KMM stops and does not come out of the rack. Support the KMM in case the rails do not lock in place and the KMM slides off the rails.

4. If the KMM does not stop, make any necessary adjustments to make sure it is locked to the sliding rails.

Connecting the KMM Power Cord

To connect the KMM power cord:

1. Plug the power cord into the back of the KMM unit.

2. Plug the power cord into the left power strip in the back of the rack.

Installing a MEDIASwitch

The MEDIASwitch connects the storage and clients to the File Manager. It allows several clients to use the storage simultaneously, and prevents interruptions by allowing other clients in the workgroup to continue working if one or more clients goes offline. The switch is available in either 8-port or 16-port versions.

The switch mounts in the rack above the drive enclosures. If you have two switches, mount them with *no space* between the switches.

Installing the MEDIASwitch Rack-Mount Rails

Follow the instructions supplied with the switch to install the rack-mount rails while ensuring that:

- The rails do not interfere with the power strips, power cords, or other cables at the back of the rack.

- The rails allow the switch to slide completely into the rack.

- The bottom of the switch is at the bottom of a U-alignment position.

Mounting the MEDIASwitch

To mount the switch on the rack-mount rails:

1. Align the fixed rails attached to the sides of the switch with the sliding rails attached to the rack.

2. Push the switch onto the sliding rails and into the rack. You will hear the rails click as they lock in place.

3. Carefully pull the switch out of the rack. Make sure that the switch stops and does not come out of the rack. Support the switch in case the rails did not lock in place and the switch slides off the rails.

4. If the switch does not stop, make any necessary adjustments to make sure it is locked to the sliding rails.

MEDIASwitch Port Requirements

The MediaNet workgroup has specific requirements for placing SFP (Small Form-factor Protocol) modules into the MEDIASwitch ports.

In the MediaNet workgroup, the MEDIASwitch can be configured for up to two File Manager ports (ports 1 and 2), up to four storage ports on an 8-port switch (ports 5 to 8), or up to eight storage ports on a 16-port switch (ports 9 to 16), with the remaining host ports available for MediaNet Fibre attached clients.

You can connect one File Manager to each File Manager port. You can connect one MediaNet client to each host port. You can connect up to four drive enclosures to each storage port.

MediaNet client ports

9100

File Manager ports   Storage ports

File Manager ports

MediaNet client ports

9200

Storage ports
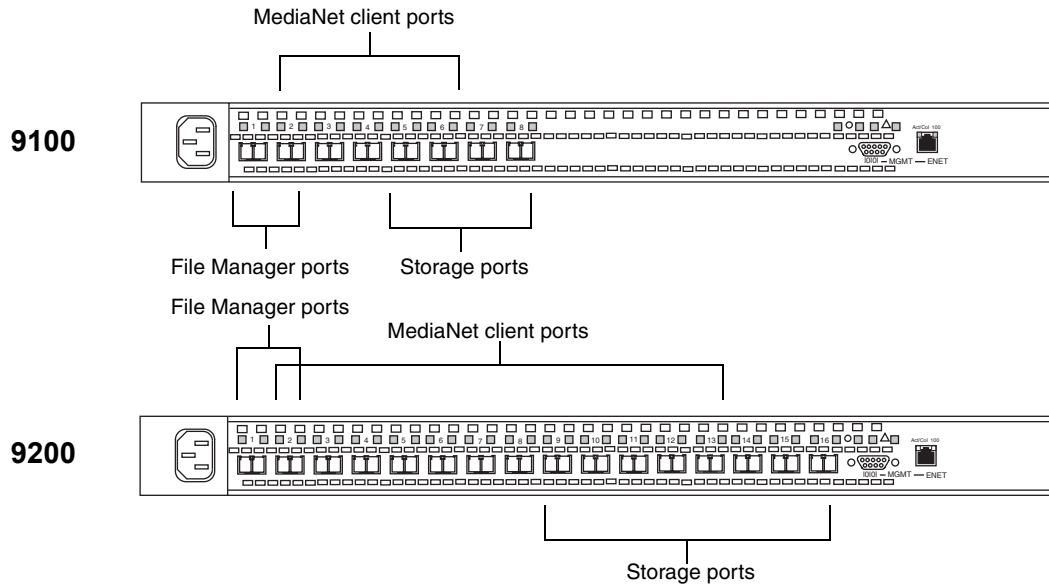
Figure 2-6   MEDIASwitch Port Layout

Installing SFPs

The MEDIASwitch can use up to eight or sixteen SFPs, depending on the switch that is part of your MediaNet workgroup. The SFPs allow you to attach cables from the File Manager, the MediaNet clients, and the drive enclosures to the switch. SFPs are supplied separately.

To install the SFPs into a switch:

1. Locate an SFP in the switch kit.

2. Position an SFP in front of a switch port. Make sure the optical connector is facing *away* from the switch and the pull tab is on the bottom.
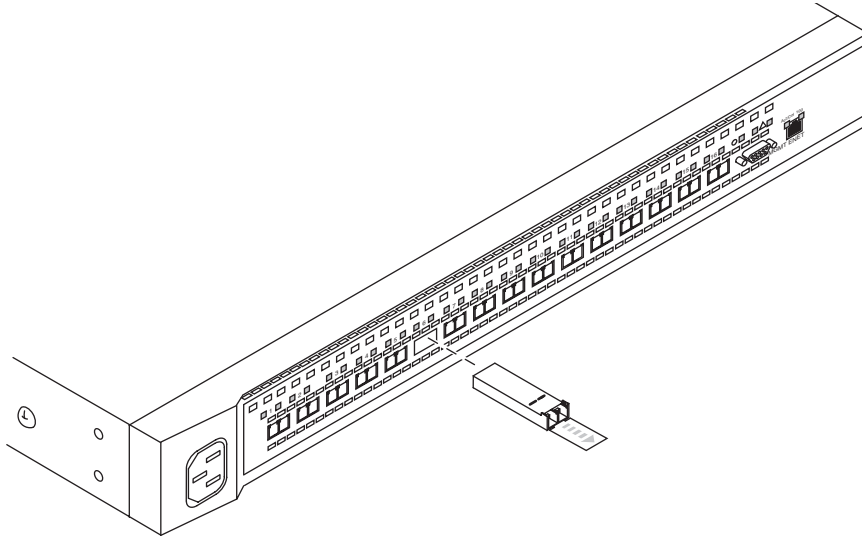
Figure 2-7   Installing an SFP

3. Slide the SFP into the MEDIASwitch port. You should hear the retainer clips click when they engage the port.

4. Repeat steps 1 to 3 for each SFP in your workgroup.

Remove any SFPs that are not populated. This will eliminate the risk of invalid error messages being logged by your SAN Insite software.

Connecting the MEDIASwitch Power Cord

To connect the switch power cord:

1. Plug the power cord into the back of the switch.

2. Plug the power cord into the right power strip in the back of the rack.

3. If you have two switches, plug the second switch power cord into the left power strip in the back of the rack.

Installing the KVM Switch (Optional)

The keyboard, video, and mouse switch allows you to connect the File Manager and multiple MediaNet clients (such as TransferManager or MediaManager) to a single keyboard, monitor, and mouse. The keyboard, monitor, and mouse can be standalone devices or a KMM assembly (see "Installing the Keyboard, Monitor, and Mouse (KMM) Assembly(Optional)" on page 2-11).

Installing the KVM Switch Rack-Mount Bracket

Follow the instructions supplied with the KVM switch to install the rack-mount bracket while ensuring that:

- The bracket does not interfere with the power strips, power cords, or other cables at the back of the rack.

- The bracket allows the KVM to slide completely into the rack.

- The bottom of the KVM is at the bottom of a U-alignment position.

Mounting the KVM Switch

To mount the KVM on the rack-mount bracket:

1. Align the KVM with the opening in the bracket.

2. Push the KVM into the bracket until the front of the KVM touches the front of the rack. The indents in the bottom of the KVM should align with the support rails on the bracket.

3. Screw the bracket and the KVM together using the screws supplied with the KVM.

Connecting the KVM Power Cord

To connect the KVM power cord:

1. Plug the power cord into the back of the KVM.

2. Plug the power cord into the right power strip in the back of the rack.

Installing File Managers

The File Manager controls the files on the storage and also controls MediaNet client access to the files. The File Manager is rack-mountable and requires 2 U of rack space.

Your MediaNet workgroup might include a Failover File Manager to limit downtime when there is a problem with the Primary File Manager.

Before you place the File Manager, you need to add the MediaNet application key (also called a dongle). The application key determines how many MediaNet clients can simultaneously use your MediaNet workgroup.

⚠ **Be careful not to lose the application key. Your MediaNet workgroup does not function without it. If you lose the application key, you must purchase another one from Avid to use your MediaNet software.**

To connect the application key to your MediaNet workgroup:

1. Locate the application key in your MediaNet kit.

2. Attach the application key to the parallel/printer port on the MediaNet Server. Secure the application key with the thumbscrews that are part of the key.

> *The File Manager ships with a parallel port or USB adapter board and a Fibre Channel adapter board (two Fibre Channel adapter boards when configured for two switches). When configured for automatic failover, a 10/100 Ethernet adapter board is also installed.*

> **Do not use the built-in USB connectors on the front or back of the SR2200. These USB connectors can support only a keyboard and mouse, and not devices such as CD-ROM drives.**

Installing File Manager Rack-Mount Rails

Follow the instructions supplied with the File Manager to install the rack-mount rear brackets while ensuring that:

- The brackets do not interfere with the power strips, power cords, or other cables at the back of the rack.

- The brackets allow the File Manager to slide completely into the rack.

- The bottom of the File Manager is at the bottom of a U-alignment position.

Mounting a File Manager

To mount a File Manager on the rack-mount brackets:

1. Attach the left and right front brackets to the File Manager.

2. Attach the rear support washers to the last mounting location on each side of the File Manager.

3. Slide the File Manager into the rack. If you have other equipment installed close to the brackets, you might need help supporting the rear of the File Manager,.

4. Set the support washers onto the brackets.

5. Attach the front bracket to the rack rails.

Connecting File Manager Power Cords

To connect the File Manager power cord:

1. Plug the power cord into the top power outlet on the back of the File Manager.

2. Plug the power cord into the left power strip in the back of the rack.

Installing a Second File Manager For Failover

The Primary File Manager and Failover File Manager are identical hardware components. If your MediaNet workgroup has a Failover File Manager, install it following the instructions in "Installing File Managers" on page 2-17.

Installing the Ethernet Hub (Optional)

You use an Ethernet hub to connect the Primary File Manager, the Failover File Manager, and the MEDIASwitches together. This allows you to manage the switches from either File Manager.

Installing the Rack-Mount Bracket

Follow the instructions supplied with the Ethernet hub to install the rack-mount bracket while ensuring that:

• The bracket does not interfere with the power strips, power cords, or other cables at the back of the rack.

• The bracket allows the hub to slide completely into the rack.

• The bottom of the hub is at the bottom of a U-alignment position.

Mounting the Ethernet Hub

To mount the Ethernet hub on the rack-mount bracket:

1. Align the Ethernet hub with the opening in the bracket.

2. Push the Ethernet hub into the bracket until the front of the
   Ethernet hub touches the front of the rack. The indents in the
   bottom of the Ethernet hub should align with the support rails on
   the bracket.

3. Screw the bracket and the Ethernet hub together using the screws
   supplied with the Ethernet hub.

Connecting the Ethernet Hub Power Cord

To connect the Ethernet hub power cord:

1. Plug the power cord into the back of the hub.

2. Plug the power cord into the right power strip in the back of the
   rack.

Connecting the File Manager and Storage

The following sections describe how to connect the components in
your MediaNet workgroup. If you are using:

Connecting a Standard Keyboard, Monitor, and Mouse to the File Manager

To connect a standard keyboard, monitor, and mouse:

1. Locate the keyboard and mouse in the File Manager kit.

2. Locate the keyboard/mouse Y-cable in the File Manager kit.

3. Attach the right branch of the connector on the Y- cable to the keyboard.

4. Attach the left branch of the connector on the Y-cable to the mouse.

When connecting the Y-cable, left and right is determined by looking at the back of the File Manager. Be sure to connect all Y-cables with the mouse on the left and keyboard on the right.

5. Attach the 15-pin monitor connector to the monitor port on the back of the File Manager.

Continue with "Connecting the File Manager to the MEDIASwitch" on page 2-24.

Connecting a Standard Keyboard, Monitor, and Mouse to the KVM

To connect a KVM:

1. Locate the keyboard and mouse in the File Manager kit.

2. Attach the connector on the keyboard cable to the keyboard port on the back of the KVM.

3. Attach the connector on the mouse cable to the mouse port on the back of the KVM.

4. Attach the 15-pin connector on the monitor cable to the monitor port on the back of the KVM.

Continue with "Connecting the File Manager to the KVM (Optional)" on page 2-22.

Connecting the KMM to the KVM (Optional)

To connect the KMM to the KVM:

1. Locate the 15-pin video connector on the KMM.

2. Attach the connector to the Monitor connector on the back of the KVM. Secure the connector with the thumbscrews in the connector.

3. Locate the cable with the keyboard and mouse connectors.

4. Push the keyboard cable connector into the keyboard connector on the back of the KVM.

5. Push the mouse cable connector into the mouse connector on the back of the KVM.

Connecting the File Manager to the KVM (Optional)

To connect the first File Manager to the KVM:

1. Locate a KVM cable in the File Manager kit. It has a 25-pin connector on one end, and a 15-pin connector, a keyboard connector, and a mouse connector on the other end.

2. Attach the 25-pin connector to port 1 on the back of the KVM. Secure the connector with the thumbscrews in the connector.

3. Attach the 15-pin connector to the video port on the back of the File Manager. Secure the connector with the thumbscrews in the connector.

4. Locate the keyboard/mouse Y-cable in the File Manager kit.

5. Attach the single cable end of the Y-cable to the keyboard/mouse port on the back of the File Manager.

6. Attach the right-hand section of the Y- cable to the keyboard cable coming from the KVM.

7. Attach the left-hand section of the Y-cable to the mouse cable coming from the KVM.

When connecting the Y-cable, left or right is determined by looking at the back of the File Manager. Be sure to connect all left-hand sections of Y-cables to the mouse and right-hand sections of Y-cables to the keyboard. The KVM cable ends are marked with symbols for mouse and keyboard.

Connecting a Failover File Manager to the KVM (Optional)

To connect a second File Manager to the KVM in a failover configuration:

1. Locate a KVM cable in the File Manager kit. It has a 25-pin connector on one end, and a 15-pin connector, a keyboard connector, and a mouse connector on the other end.

2. Attach the 25-pin connector to port 2 on the back of the KVM. Secure the connector with the thumbscrews in the connector.

3. Attach the 15-pin connector to the video port on the back of the Failover File Manager. Secure the connector with the thumbscrews in the connector.

4. Locate the keyboard/mouse Y-cable in the File Manager kit.

5. Attach the single cable end of the Y-cable to the keyboard/mouse port on the back of the File Manager.

6. Attach the right-hand section of the Y- cable to the keyboard cable coming from the KVM.

7. Attach the left-hand section of the Y-cable to the mouse cable coming from the KVM.

When connecting the Y-cable, left or right is determined by looking at the back of the File Manager. Be sure to connect all left-hand sections of Y-cables to the mouse and right-hand sections of Y-cables to the keyboard. The KVM cable ends are marked with symbols for mouse and keyboard.

Connecting the File Manager to the MEDIASwitch

To connect the File Manager to the MEDIASwitch:

1. Locate a 10-foot (3-meter) optical cable in the File Manager kit.

If the File Manager is set up for dual switches there are two Fibre Channel adapter boards installed. Attach the first cable to the top board in the File Manager PCI card bracket first.

2. Attach one end of the cable to the Fibre Channel adapter board populating the top slot. Secure the optical cable by firmly inserting the connector into the optical port.

3. Attach the other end of the cable to port 1 on the first switch.

4. If you have a second switch, locate another 10-foot (3-meter) optical cable in the File Manager kit.

5. Attach one end of the cable to the Fibre Channel adapter board populating the middle slot in the File Manager PCI card bracket.

6. Attach the other end of the cable to port 1 on the second switch.

Connecting a Failover File Manager to the MEDIASwitch

To connect a Failover File Manager to the MEDIASwitch:

1. Locate a 10-foot (3-meter) optical cable in the File Manager kit.

If the File Manager has two Fibre Channel adapter boards, attach the cable to the top board in the File Manager PCI card bracket. For more information on the File Manager PCI card brackets.

2. Attach one end of the cable to the Fibre Channel adapter board. Secure the optical cable by firmly inserting the connector into the optical port.

3. Attach the other end of the cable to port 2 on the first switch.

4. If you have a second switch, locate another 10-foot (3-meter) optical cable in the File Manager kit.

5. Attach one end of the cable to the Fibre Channel adapter board populating the middle slot in the Failover File Manager PCI card bracket. For more information on the File Manager PCI card brackets, see *Avid SR2200 Platform Introduction.*

6. Attach the other end of the cable to port 2 on the second switch.

Connecting the MEDIASwitch Serial Port to the File Manager for Initial Switch Configuration

You should connect the MEDIASwitch serial port to the File Manager to accommodate changing the switch IP address in your initial switch configuration.

To connect the switch to the File Manager:

1. Locate the RJ-45-to-9-pin serial adapter in the File Manager kit.

2. Locate the serial cable supplied with the MediaSwitch.

3. Connect the RJ-45-to-9-pin serial adapter to the RJ-45 Serial port on the back panel of the File Manager.

4. Connect the serial cable from the MediaSwitch to the 9-Pin connector of the serial adapter.

5. Connect the serial cable from the MediaSwitch to the 9-Pin connector on the MediaSwitch.

If you have two switches, you can move the serial cable from one switch to the other when you need to change the other switch's IP address. See "Adding the MEDIASwitch to the Hosts File" on page 3-6.

Connecting the MEDIArray II Drive Enclosure to the MEDIASwitch

Each drive enclosure is supplied with two I/O Modules. The I/O Modules connect the storage to the MEDIASwitches. Figure 2-8 shows the locations of the I/O Modules on the rear of the drive enclosure.
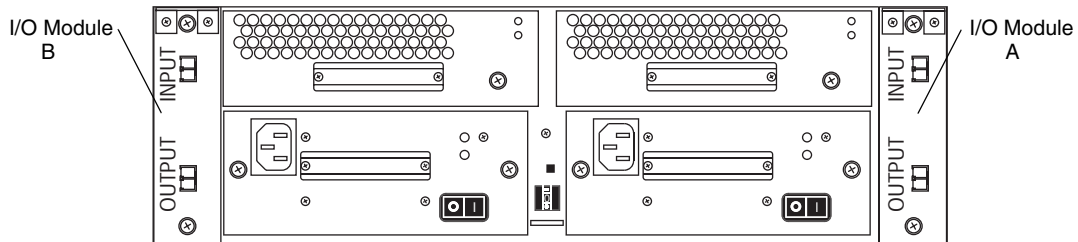
Figure 2-8   Drive Enclosure Connection Locations

Each I/O Module has two connectors: the primary (INPUT) connector and the expansion (OUTPUT) connector (see Figure 2-8). The INPUT port on the I/O Module accepts data from a host or another I/O Module when two drive enclosures are daisy-chained together. The OUTPUT port on the I/O Module is used to pass data to the INPUT port on the next I/O Module when two drive enclosures are daisy-chained together.

You connect the drive enclosures to the MEDIASwitch either individually or in groups of two. The number of drive enclosures and MediaNet clients that you have in your workgroup, and the type of work that the clients will do, determine how you need to connect the drive enclosures to the switch. You typically connect several groups of drive enclosures, up to the maximum of 8 enclosures, to the switch.

If you need to connect:

- One drive enclosure, see "Connecting One MEDIArray II Drive Enclosure" on page 2-27 for cabling instructions.

- A daisy chain of two drive enclosures, see "Connecting a Daisy Chain of Two MEDIArray II Drive Enclosures" on page 2-32 for cabling instructions.

Connecting One MEDIArray II Drive Enclosure

When you have one drive enclosure in your MediaNet workgroup or Trilligent Cluster, you connect it directly to the MEDIASwitch (see Figure 2-9).
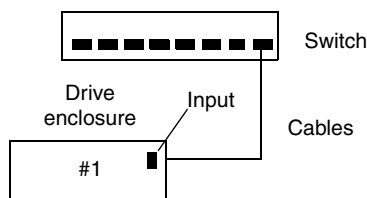
Figure 2-9   Cabling for One MEDIArray II Drive Enclosure

Connecting the Cable to the MEDIArray II Drive Enclosure

To connect the MEDIArray II drive enclosure:

1. Locate a 10-foot (3-meter) optical cable in the MEDIArray II kit.

   ▶ If you are connecting to a 1-Gb MEDIASwitch, the cable has an SC (large) optical connector on one end and an LC (small) connector on the other end.

Connecting the File Manager and Storage

▶ If you are connecting to a 2-Gb MEDIASwitch, the cable has an LC (small) optical connector on both ends.

2. Attach the connector on one end of the cable to the INPUT connector on I/O Module A on the back of drive enclosure 1 (see Figure 2-9). Secure the optical cable by firmly inserting the connector into the optical port.

3. Do one of the following:

▶ If you are connecting to a 1-Gb MEDIASwitch, continue with "Connecting to a 1-Gb MEDIASwitch" on page 2-28.

▶ If you are connecting to a 2-Gb MEDIASwitch, continue with "Connecting to a 2-Gb MEDIASwitch" on page 2-30.

Connecting to a 1-Gb MEDIASwitch

To connect an optical cable to the 1-Gb MEDIASwitch:

1. Locate the GBIC in the MEDIArray II kit.

2. Route the cable from the MEDIArray II to the MEDIASwitch, if it has not already been installed.

3. Position the GBIC in front of a MEDIASwitch port (see Figure 2-10). Make sure the optical connector is facing *away* from the MEDIASwitch.
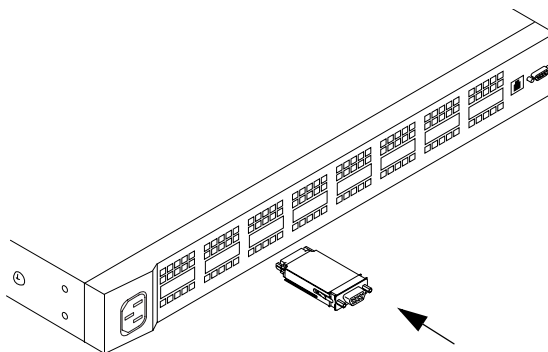
Figure 2-10   Installing a GBIC

You can install the GBIC while the MEDIASwitch is turned on.

4. Slide the GBIC into the MEDIASwitch port. You should hear the retainer clips "click" when the GBIC is seated in the port.

5. Remove the protective covers from the optical connector on the optical cable.

6. Remove the protective cover from the GBIC in the MEDIASwitch.

7. Attach the connector on the cable into the GBIC for the client (see Figure 2-11). Firmly push the plug on the cable into the connectors on the optical GBIC.
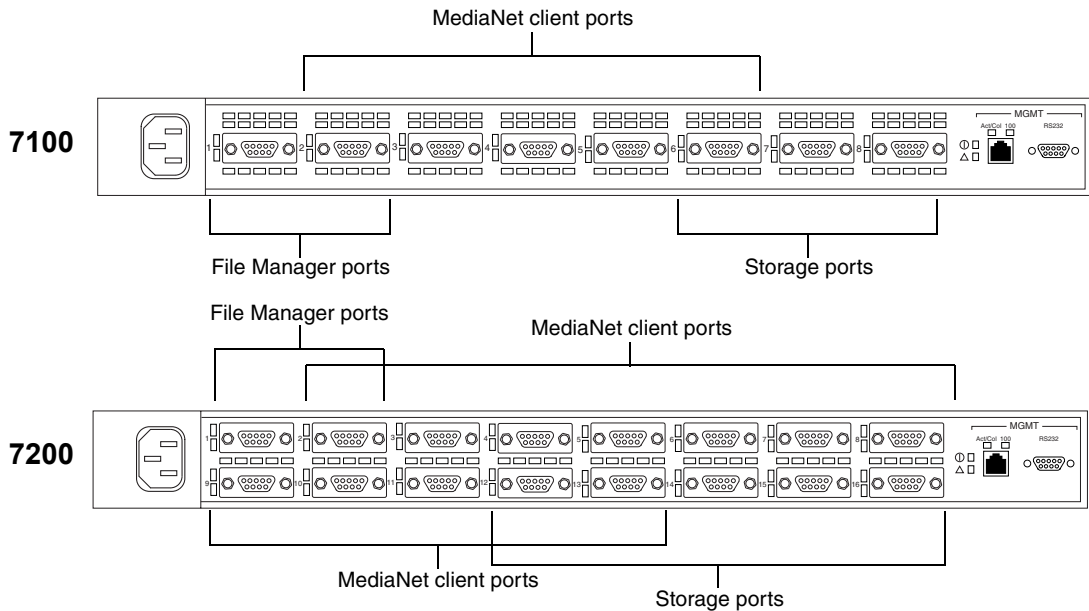
Figure 2-11 MEDIASwitch Port Layout

8. Label the cable with the name or location of the MEDIArray II to which it connects.

Connecting to a 2-Gb MEDIASwitch

To connect an optical cable to the 2-Gb MEDIASwitch:

1. Locate an SFP in the MEDIArray II kit.

2. Route the cable from the MEDIArray II to the MEDIASwitch, if it has not already been installed.

3. Position the SFP in front of a MEDIASwitch port. Make sure the optical connector is facing *away* from the MEDIASwitch (see Figure 2-12).
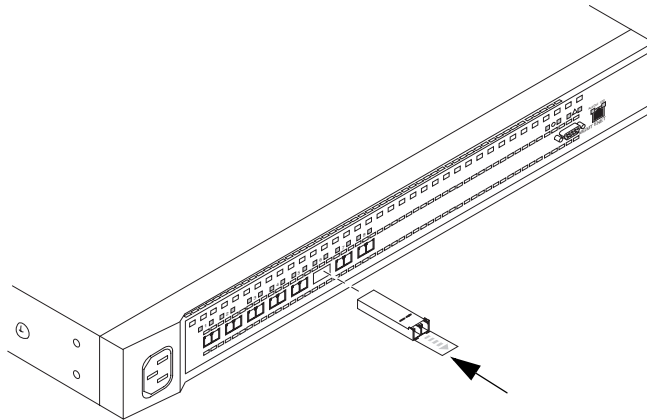
Figure 2-12   Installing an SFP

You can install the SFP while the MEDIASwitch is turned on.

4. Slide the SFP into the MEDIASwitch port. You should hear a "click" when the SFP is seated in the port.

5. Remove the protective covers from the optical connector on the optical cable.

6. Remove the protective cover from the SFP in the MEDIASwitch.

7. Attach the connector on the cable to the SFP for the client (see Figure 2-13). Firmly push the plug on the cable into the connectors on the optical SFP.

8. Label the cable with the name or location of the MEDIArray II to which it connects.
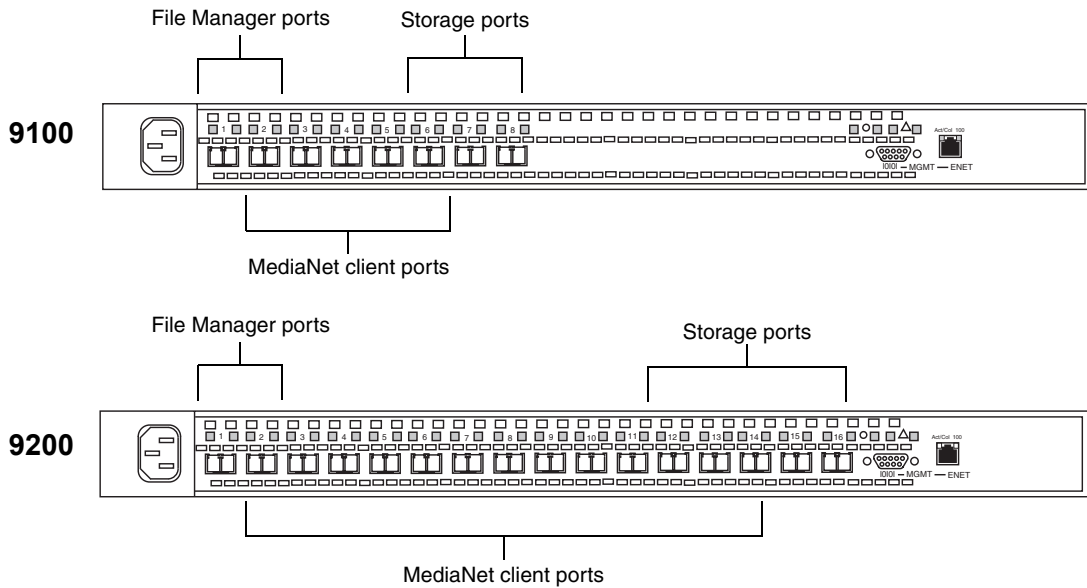
Figure 2-13   MEDIASwitch Port Layout

Connecting a Daisy Chain of Two MEDIArray II Drive Enclosures

When you have multiple drive enclosures in your MediaNet workgroup or Trilligent Cluster, you can create daisy chains of two drive enclosures to connect to the MEDIASwitch (see Figure 2-14).
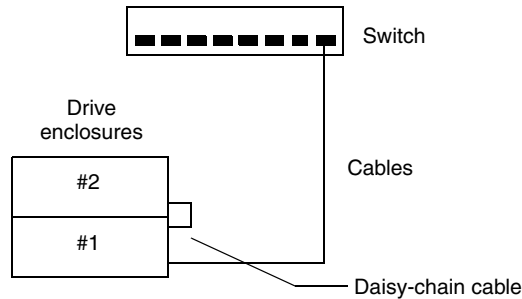
Figure 2-14   Cabling for Two MEDIArray II Drive Enclosures

To connect the drive enclosures:

1. Locate a 10-foot (3-meter) optical cable in the MEDIArray II kit.

2. Attach the optical connector on one end of the optical cable to the INPUT optical connector on I/O Module A on the back of drive enclosure 1 (see Figure 2-14). Secure the optical cable by firmly inserting the connector into the optical port.

3. Attach the optical connector on the other end of the cable to any of the unpopulated switch ports 5 through 8 on an 8-port switch or ports 9 to 16 on a 16-port switch (see Figure 2-15). Secure the optical cable by firmly inserting the connector into the SFP.
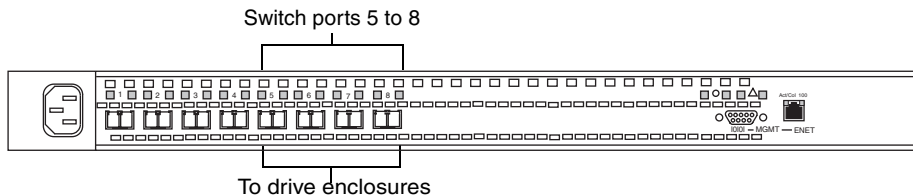
Figure 2-15   Cabling to a MEDIASwitch Port

4. Locate a 1-foot (0.3-meter) optical cable in the kit.

5. Attach the optical connector on one end of the cable to the OUTPUT optical connector on I/O Module A on the back of drive enclosure 1 (see Figure 2-16). Secure the optical cable by firmly inserting the connector into the optical port.

6. Attach the optical connector on the other end of the cable to the INPUT optical connector on I/O Module A on the back of drive enclosure 2 (see Figure 2-16). Secure the optical cable by firmly inserting the connector into the optical port.
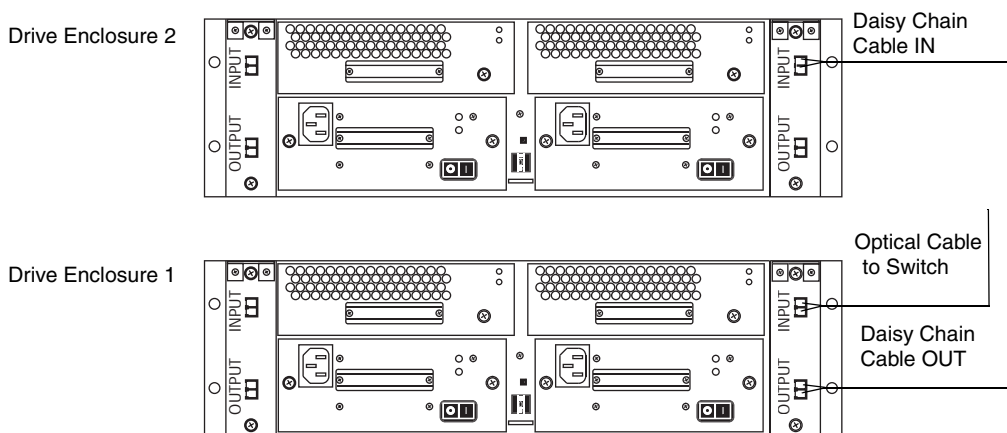
Figure 2-16   Daisy Chaining Drive Enclosures

Connecting to Two MEDIASwitches

When you have two MEDIASwitches in your MediaNet workgroup, you need to connect cables from I/O Module A on the drive enclosures to the first switch and from I/O Module B on the drive enclosures to the second switch (see Figure 2-17). After you have connected the cables between I/O Module A on the drive enclosures and the first switch, repeat the cabling for the same drive enclosures, this time using I/O Module B and connect them to the second switch.

> *Make sure that you connect cables from I/O Module A and I/O Module B to the same ports on both switches.*

On an 8-port switch you can use ports 5 to 8 to connect drive enclosures. On a 16-port switch you can use ports 9 to 16 to connect drive enclosures.
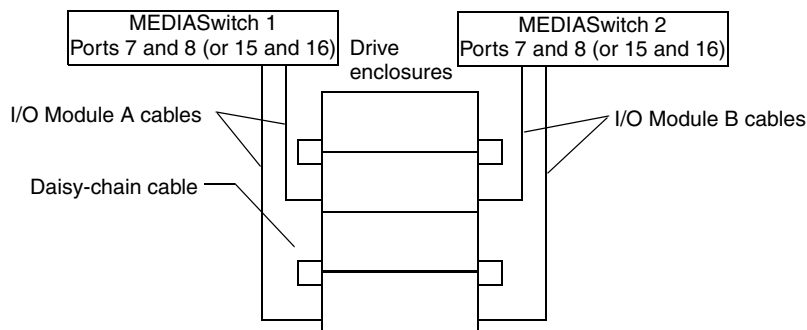
Figure 2-17   Cabling for Two MEDIASwitches

Connecting the File Manager to the Ethernet Hub

To connect the File Manager to the Ethernet hub:

1. Locate an Ethernet cable in the MEDIASwitch kit.

2. Attach one end of the cable to port 1 on the hub.

3. Attach the other end of the cable to the File Manager Ethernet adapter card in the PCI card bracket.

⚠ **Connecting your File Manager to an Ethernet hub is optional in a MediaNet workgroup, but mandatory when running a Trilligent Cluster.**

Connecting a Failover File Manager to the Ethernet Hub

To connect a Failover File Manager to the hub in a failover configuration:

1. Locate an Ethernet cable in the File Manager kit.

2. Attach one end of the cable to port 2 on the hub.

3. Attach the other end of the cable to the File Manager built-in Ethernet port 1.

Connecting the MEDIASwitch to the Ethernet Hub

To connect the MEDIASwitch to the Ethernet hub:

1. Locate an Ethernet cable in the MEDIASwitch kit.

2. Attach one end of the cable to port 3 on the hub.

3. Attach the other end of the cable to the MGMT ENET connector on the back of the switch.

4. If you have a second switch, repeat steps 1 to 3 this time using port 4 on the hub.

The MEDIASwitches have the same IP address by default. For more information on IP address configuration, see Table 2-1 on page 2-37.

Cross-Connecting the File Managers in Failover Configurations

To connect the Primary File Manager and Failover File Manager:

Use the following diagram, table, and instructions for connecting and configuring the File Managers for failover operation.
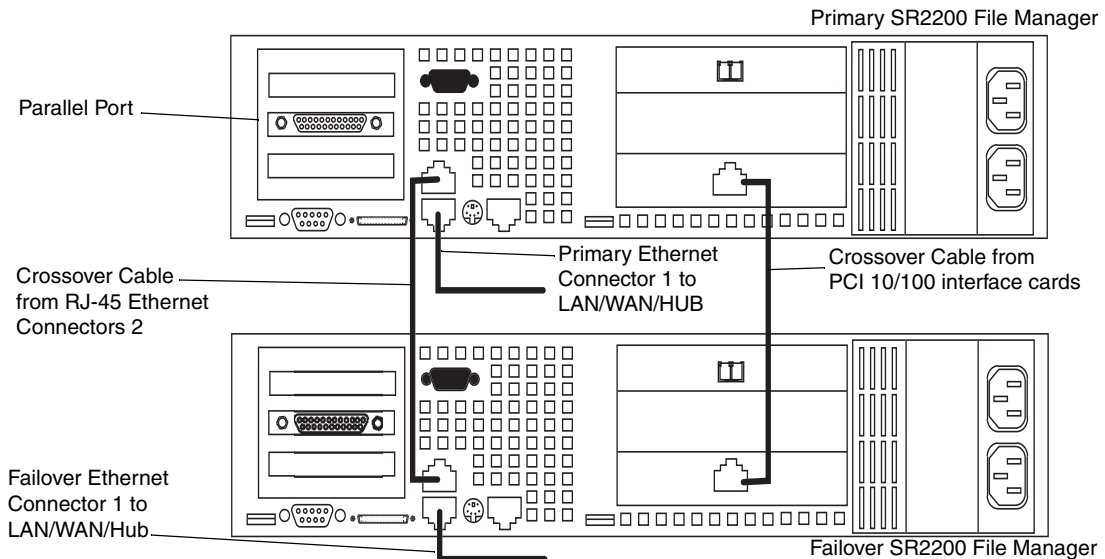
Figure 2-18   File Managers in Failover Configuration

1. Connect the RJ-45 Ethernet connector 2 of the Primary File Manager to the RJ-45 Ethernet connector 2 of the Failover File Manager using the supplied crossover cable.

2. Connect the Primary File Manager RJ-45 10/100 Ethernet port on the full-height PCI interface card to the Failover File Manager RJ-45 10/100 Ethernet port of the full-height PCI interface card.

3. Connect the RJ-45 Ethernet connector 1 on the Primary File Manager to your LAN/WAN or optional Ethernet hub.

4. Connect the RJ-45 Ethernet connector 1 of the Failover File Manager to your LAN/WAN or optional Ethernet hub.

5. Configure the IP addresses for the File Managers as shown in Table 2-1.

Table 2-1   File Manager IP Addresses

IP Address	Description
192.168.1.1[a]	Primary File Manager RJ-45 Ethernet Connector 1
192.168.2.1	Primary File Manager RJ-45 Ethernet Connector 2
192.168.3.1	Primary File Manager PCI 10/100 NIC
192.168.1.2	Failover File Manager RJ-45 Ethernet Connector 1
192.168.2.2	Failover File Manager RJ-45 Ethernet Connector 2
192.168.3.2	Failover File Manager PCI 10/100 NIC

a. This is the default IP address to use for configuring the Fibre Channel switch initially. Change this IP address to comply with your specific IP addressing conventions when configuring the Fibre Channel switch for use in your network.

When viewing the IP addresses in a Windows NT environment, the File Manager Ethernet Connector numbering is reversed;
Connector 1 will show as connector 2
Connector 2 will show as connector 1
Connector 3, the RJ-45 10/100 Ethernet PCI full height interface card (when installed) maintains its numeric position. See "File Managers in Failover Configuration" on page 2-36.

CHAPTER 3

Configuring the MEDIASwitches

This chapter describes how to install the appropriate software and how to configure the MEDIASwitches in your MediaNet workgroup or Trilligent Cluster. Installing all the necessary software is a multistep process. Make sure you complete the sections in sequential order.

The IP addresses used in the following sections are recommendations. They are non-routing IP addresses and can be used if your site does or does not currently have an Ethernet network. If your site has an Ethernet network, you can select unused IP addresses from your network environment for the MEDIASwitches.

Changing the MEDIASwitch IP Address

You initially connect to the MEDIASwitch from the File Manager using the serial cable that you installed earlier (see "Connecting the MEDIASwitch Serial Port to the File Manager for Initial Switch Configuration" on page 2-25). Make sure the serial cable is connected to both the File Manager and the MediaSwitch you want to configure.

The MEDIASwitch ships with a default IP address of 192.168.1.129. If you are not changing the IP address of the switch to an address on

your internal network, continue with "Establishing a Connection to the MEDIASwitch" on page 3-7.

If you have more than one MEDIASwitch, and your File Manager and switches are connected to an Ethernet network, you should turn one switch off before running SAN InSite for the first time to configure the switch IP addresses. This prevents SAN InSite from seeing duplicate IP addresses that can cause SAN InSite not to recognize either switch.

If you have two switches, you need to change the IP address of the second switch so that it does not conflict with the first switch. If you are not changing the IP address to an address on your internal network, use the IP address 192.168.1.130.

To change the switch IP address:

1. Open a terminal session through a terminal emulation program, such as HyperTerminal, with the serial port set to COM 1 and the following serial port parameters:

    - Bits per second: 19200

    - Data bits: 8

    - Parity: None

    - Stop bits: 1

    - Flow control: Xon/Xoff

2. Press Enter and a password dialog box appears in the HyperTerminal window.

3. Type the password **manage** to start the Command Line Interface (CLI).

4. At the Root menu prompt type **1** (Config) and press Enter. The Config window appears.

5. At the Config prompt, type **8** (Com) and press Enter. The Config/Com window appears.

6. At the Config/Com prompt, type **4** (Ethernet) and press Enter. The Ethernet menu appears.

7. To change the MEDIASwitch Ethernet IP address type **3** (Set Ethernet Address) and press Enter.

8. At the IP Address prompt, type in the new IP address and press Enter.

9. At the Ethernet menu and type **4 (**Netmask) and press Enter.

10. At the Netmask prompt, type in the Netmask and press Enter.

11. At the Ethernet menu and type **5 (**Gateway IP address) and press Enter.

12. At the Gateway IP Address prompt, type in the new Gateway IP address and press Enter.

13. Reset the MEDIASwitch by unplugging it, then plugging it back in to make the changes take affect.

14. Log out of the CLI type **logout** at the prompt.

15. Close the HyperTerminal window.

Installing SAN InSite Professional

MediaNet Release 3.0 uses an updated release of SAN InSite Professional software to configure the MEDIASwitches.

To install SAN InSite Professional:

1. Locate the SAN InSite Professional CD-ROM.

2. Insert the CD-ROM into the File Manager CD-ROM drive. The CD-ROM is set to auto-start and the SAN InSite Professional installation starts. This takes approximately 1 minute. The Verify Account Privileges dialog box appears.

    If the CD-ROM does not auto-start, start the installation manually as follows:

    a. Double-click the My Computer icon on the desktop. The My Computer window opens.

      b.   Right-click the CD-ROM icon and choose AutoPlay from the pop-up menu. The SAN InSite Professional installation starts. The Verify Account Privileges dialog box appears.

3. Click Yes. The SAN InSite Professional window opens to the Introduction screen.

4. Click Next. The License Agreement screen appears. Read the agreement and click Yes.

5. Click Next. The Choose One Item To Install screen appears.

6. Click SAN InSite Professional.

7. Click Next. The Choose A Directory screen appears. Make no changes.

8. Click Next. The Enter Server Address screen appears. It shows the host name for the File Manager. If it is correct, click Yes. Write the host name down; you will need it later.

9. Click Next. The Enter License screen appears.

10. Type the license number in the text box. The license number is on the CD-ROM case.

11. Click Next. The License Status screen appears showing the status of the license. It should indicate the number of agents available and the license expiration date.

12. Click Next. The Installation screen appears showing the software installation progress.

13. When the software installation is complete, the SAN InSite Professional Server Configuration window opens.

14. Click the Log tab.

15. Select each check box to turn on all of the event logging capabilities.

16. In the "Site log entry priority levels" menu, choose "info,config,warning,fail."

17. Click the Discover tab.

18. Select the "Discover agents listed below" check box. The Add button becomes available.

19. Click the Add button. The Add Agent IP Address/DNS Host Name dialog box appears.

20. Type the IP address for your MEDIASwitch in the text box and click OK. The IP address appears in the list on the Discover tab.

21. If you have two MEDIASwitches, repeat step 20 for the second switch.

22. Click OK. A Message dialog box appears stating that the configuration was successful.

23. Click OK. The SAN InSite Professional Install Complete screen appears.

24. Click OK. The SAN InSite Professional window closes.

25. Click the Start button, and then select Shut Down. The Shut Down dialog box appears.

26. Choose Restart from the menu and click OK. The File Manager reboots.

27. When the reboot is complete, log in as Administrator.

Configuring the MEDIASwitch

You need to configure the MEDIASwitch to have a valid IP address and to have appropriate port configurations for the File Manager, MediaNet clients, and drive enclosures in your MediaNet workgroup or Trilligent Cluster.

Copying the MEDIASwitch Files into the SAN InSite Folder

The MEDIASwitch has configuration files that you need to copy into the SAN InSite Pro folder.

To copy the configuration files:

1. Make sure that the MediaNet CD-ROM is in the File Manager CD-ROM drive.

2. Click Start, point to Programs, and then click Windows NT Explorer. The Windows NT Explorer window opens.

3. Expand the CD-ROM to show the \Drivers_Firmware\FibreChannelSwitches\Vixel folder.

4. Expand the C: drive to show the \SANInSitePro\SIFileSystemRoot\deviceconfig\vixel folder.

5. Drag the \Drivers_Firmware\FibreChannelSwitches\Vixel folder to the \SANInSitePro\SIFileSystemRoot\deviceconfig\vixel folder.

6. Click Copy Here in the pop-up menu. The files are copied to the new location.

Adding the MEDIASwitch to the Hosts File

You need to add the MEDIASwitch IP address to the Hosts file to be able to download switch firmware and make other updates.

To add the switch IP address to the Hosts file:

1. Locate the Hosts file. It is found at *%systemroot%*\system32\drivers\etc, where *%systemroot%* is typically C:\Winnt.

2. Open the Hosts file with a text editor, such as WordPad.

3. Scroll to the end of the file.

4. On a new line, type **192.168.1.129 #9x00 switch**. Use the correct IP address and switch name for your switch.

5. If you have two switches, repeat step 4 for the second switch, using its IP address.

6. Close and save the Hosts file.

Establishing a Connection to the MEDIASwitch

To establish the connection:

1. Click the Start button, point to Programs, point to SAN InSite Professional, and then click Run SAN Insite Client. The SAN InSite Professional Server Specification dialog box appears, showing the server IP address or server DNS name.

2. Click Connect. The SAN InSite Professional User Authorization dialog box appears.

3. Click Monitor & Manage.

4. Type **manage** into the Password text box.

5. Click OK. The SAN Insite Professional window opens. You should see the switch IP address in green.

Setting the MEDIASwitch Configuration

This section describes how to configure the MEDIASwitch.

To load switch firmware and configuration files:

1. Connect a crossover Ethernet cable between the File Manager Ethernet port and the switch MGMT port.

2. Click Start, point to Programs, point to SAN InSite Professional, and then click Run SAN Insite Client. The SAN InSite Professional Server Specification dialog box appears showing the server host name.

3. Click Connect. The SAN InSite Professional User Authorization dialog box appears.

4. Click Monitor & Manage.

5. Type **manage** into the Password text box.

6. Click OK. The SAN InSite Professional Server window opens.

7. Double-click the switch that you want to update. The Switch window opens.

8. In the Switch window, click the Tools menu, then click Configure firmware image. The Firmware Image Configuration window opens.

9. Click Browse. The Select File dialog box appears.

10. Navigate to Vixel\Firmware\YGb \Vixel_xxxx, where xxxx is the model number of your switch. Y is the switch speed (1 or 2.)

11. Click the .dwn file in the switch folder.

12. Click OK. The firmware file name appears in the File Name text box in the Firmware Image Configuration window.

13. Click Download. The firmware downloads to the Active Image in the switch. When the download completes, a dialog box appears asking if you want to set both images to the new firmware.

⚠ **Avid recommends that you download the new firmware to both the Active Image and the Alternate Image. This prevents problems if the switch should change from the Active Image to the Alternate Image for any reason.**

14. Click Yes to choose a configuration file to download with the firmware. The Select File dialog box appears.

15. Navigate to Vixel\Config Files\YGb \Vixel_xxxx, where xxxx is the model number of your switch. Y is the switch speed (1 or 2.)

16. Click the configuration file in the switch folder. The files have the following naming convention.

9100_tm_1fm_3h_4j

Number of MEDIArray enclosure connections
Number of clients
Number of File Managers
Target Mode enabled
MEDIASwitch model
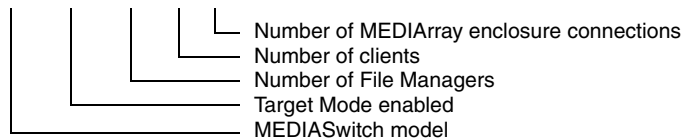
17. Click OK. The firmware and switch configuration file download to the Active Image and Alternate Image, and the switch resets. This takes approximately 4 minutes.

18. When the download and reset are complete, close the Switch window.

Once this process is complete the name of the switch in the SAN Insite main window should match the configuration you loaded.

SAN InSite Server

Avid has discovered performance issues when running the SAN InSite Server in most MediaNet configurations. You can avoid these issues by stopping the SAN InSite Server and changing the SAN InSite Service to start manually.

To stop the SAN InSite Server:

1. Click the Start button, point to Programs, point to SAN InSite Professional, point to SAN InSite Server, and then select Stop Server.

2. Click the Start button, point to Settings, and then select Control Panel. The Control Panel window opens.

3. Double-click the Services icon. The Services dialog box appears.

4. Locate and select the SAN InSite Professional v3.5 service in the list of services.

5. Click Startup. The Service dialog box appears.

6. In the Startup Type area, click Manual.

7. Click OK. The dialog box closes and the service is reset.

8. Click Close.

Using the SAN InSite Client

Avid recommends that you do not run the SAN InSite client and the File Manager software at the same time. Stop the File Manager from the Monitor Tool before running the SAN InSite Client.

To use the SAN InSite client to change your MEDIASwitch settings:

1. Stop the File Manager using the Monitor Tool.

2. Click the Start button, point to Programs, point to SAN InSite Professional, point to SAN InSite Server, and then select Start Server. It takes the server software about 20 seconds to start, so you should wait before continuing with step 3.

3. Click the Start button, point to Programs, point to SAN InSite Professional, and then select Run SAN InSite Client.

4. Log in to SAN InSite as usual and make the necessary changes.

5. Quit the SAN InSite client.

6. Click the Start button, point to Programs, point to SAN InSite Professional, point to SAN InSite Server, and then select Stop Server.

7. Start the File Manager using the Monitor Tool.

CHAPTER 4

Configuring the File Manager

This chapter describes how to configure and install the appropriate software on the File Managers in your MediaNet workgroup or Trilligent Cluster. Installing all the necessary software is a multistep process. Make sure you complete the sections in sequential order.

Before you start the procedures in this chapter, you should have the File Managers and other MediaNet workgroup or Trilligent Cluster hardware installed.

The IP addresses used in the following sections are recommendations. They are non-routing IP addresses and can be used if your site does or does not currently have an Ethernet network. If your site has an Ethernet network, you can select unused IP addresses from your network environment for the File Manager.

Setting Up the File Manager

Set up the File Manager and, in failover configurations, the second File Manager as described in the following sections.

Quick Summary

If you are already familiar with configuring Windows NT systems, you may choose to skip the detailed directions in the rest of this chapter and perform the steps outlined here.

- Check that the File Manager is running Windows NT Workstation with Service Pack 5 and the ScsiPort.sys hotfix.

- Accurately set the date, time, and time zone.

- Configure IP addresses and, if necessary, gateway IP addresses for the network adapter.

- Configure paging file size to be two times the installed RAM size on the D: drive. See "Setting the File Manager Paging File Size" on page 4-4.

Checking the Operating System Installation

The File Manager runs the Windows NT Workstation 4.0 operating system, and Service Pack 5 and the ScsiPort.sys hotfix.

Avid ships the File Manager with Windows NT Workstation, Service Pack 5, and the ScsiPort.sys hotfix preinstalled. If you are concerned that the operating system may not be appropriately installed, you can check by following the procedures in this section.

To determine that the appropriate Windows NT Workstation operating system, service pack, and hotfix versions are installed on the File Manager:

1. Click the Start button, point to Programs, point to Administrative Tools, and then select Windows NT Diagnostics. The Windows NT Diagnostics window opens.

2. Click the Version tab. The version of the Windows NT Workstation operating system and Service Pack installed on the File Manager appears below the Windows icon.

3. Open the Add/Remove Programs control panel and check to see if the ScsiPort.sys hotfix is installed.

If your File Manager does not have the Windows NT Workstation 4.0 operating system, Service Pack 5, or the ScsiPort.sys hotfix properly installed, you should install the Windows NT Workstation operating system, the service pack, the hotfix, or all three.

Window NT Service Pack 5 and the ScsiPort.sys hotfix are provided in the Extras folder on the MediaNet CD-ROM.

When you reinstall the Windows NT operating system for any reason, make sure you perform a default installation (accept all the standard installation recommendations) of the Windows NT Workstation 4.0 operating system. Follow the Windows NT installation instructions that came with your Windows NT software.

Setting the Date, Time, and Time Zone

You need to correctly set the date, time, time zone, and daylight saving time option on the File Manager. This allows the "Synchronize time with File Manager" function on the MediaNet clients to work correctly.

To set the date, time, time zone, and daylight saving time option on the File Manager:

1. Double-click the time in the taskbar. The Date/Time Properties dialog box appears.

2. Set the date and time by using the Date & Time tab.

3. Click the Time Zone tab.

4. Set the time zone correctly for the location of the File Manager. By default, Windows NT 4.0 sets the time zone to "(GMT - 8:00) Pacific Time (US & Canada), Tijuana."

5. Make sure that "Automatically adjust clock for daylight saving changes" is selected.

6. Click OK to close the Date/Time Properties dialog box and save the settings.

Setting the File Manager Paging File Size

The paging file extends the physical memory (RAM) in your File Manager by using a portion of the hard drive as a location to move unused data from physical memory. Windows NT uses the paging file (pagefile.sys) to track the size and location of the reserved hard drive space, and to move data to the hard drive from RAM.

Avid ships all File Managers with the paging file configured to 2048 MB.

The File Manager allocates 2048 MB of memory on the D: drive of the internal (system) hard drive. This provides adequate space for normal File Manager operation.

To set the paging file size:

1. Right-click the My Computer icon on the desktop and select Properties. The System Properties dialog box appears.

2. Click the Performance tab. The performance settings appear.

3. Click the Performance Options button. The Performance Options dialog box appears.

4. Click the Change button. The Virtual Memory dialog box appears.

5. Select D: in the Drive [Volume Label] list.

Make sure you select a drive or partition with sufficient free space for the page file.

6. Double-click the text box next to Initial Size (MB) and type **1536**.

7. Double-click the text box next to Maximum Size (MB) and type **3072**.

8. Click the Set button.

9. Click OK to close the Virtual Memory dialog box.

10. Click OK to close the Performance Options dialog box

11. Close the System Properties dialog box.

12. Click the Start button and select Shut Down. The Shut Down Windows dialog box appears.

13. Choose Restart from the menu and click OK. The new paging file size takes effect after the restart is complete.

Configuring Network Properties

You need to configure the File Manager's network properties so that it can communicate with the MEDIASwitch.

This section describes how to set network properties for a workgroup with a single File Manager. If you have a failover configuration with two File Managers, continue with "Configuring Network Properties for File Managers in a Failover Configuration" on page 4-7.

To configure the network properties:

1. Right-click Network Neighborhood on the desktop and select Properties. The Network dialog box appears.

2. Click the Protocols tab. The TCP/IP Protocol should be the only protocol installed on the File Manager.

3. Select TCP/IP Protocol and click the Properties button. The Microsoft TCP/IP Properties dialog box appears.

4. Choose the Ethernet connector 2 adapter.

5. Click Specify an IP address.

6. Type **192.168.1.1** into the IP Address text box and press the Tab key. The File Manager should fill in the subnet mask with 255.255.255.0. If not, type the subnet mask in the Subnet Mask text box.

7. Click OK to set the changes.

8. Click the Services tab.

9. In the Network Services list, click Server.

10. Click Properties and set Minimize Memory to make more memory available to the File Manager.

11. Click OK to return to the Services tab.

12. Close the Network dialog box.

Configuring System Properties

To configure the File Manager system properties:

1. Click the Start button, point to Settings, and then click Control Panel. The Control Panel window opens.

2. Double-click System. The System Properties dialog box opens.

3. Click the Performance tab.

4. Set the Boost slider to None.

5. Click the Startup/Shutdown tab.

6. Click "Write debugging information to" and use the default location and file name.

7. Click Automatically reboot.

8. Close the System Properties dialog box to save the changes.

9. Reboot the File Manager.

Configuring a Second File Manager For Failover

If your MediaNet workgroup is a failover configuration with redundant File Managers, you should configure the Failover File Manager now. To configure the Failover File Manager, repeat all the steps in "Setting Up the File Manager" on page 4-2.

When you are done configuring the Failover File Manager, stop the File Manager service using the Monitor Tool, but do not shut it down.

Configuring Network Properties for File Managers in a Failover Configuration

To configure a failover environment, you need six dedicated non-routeable Internet IP addresses: three for the Primary File Manager and three for the Failover File Manager. The IP addresses are for the built-in Ethernet ports and the Ethernet adapter board. The IP addresses for these ports must be on different subnets and require a subnet mask of 255.255.255.0.

Avid recommends that you use the non-routeable IP addresses shown in Table 4-1 when you are configuring File Managers for failover operation.

Table 4-1   Failover IP Addresses

IP Address	Description
192.168.1.1[a]	Primary File Manager RJ-45 Ethernet Connector 1
192.168.2.1	Primary File Manager RJ-45 Ethernet Connector 2
192.168.3.1	Primary File Manager PCI 10/100 NIC
192.168.1.2	Failover File Manager RJ-45 Ethernet Connector 1

Table 4-1   Failover IP Addresses

IP Address	Description
192.168.2.2	Failover File Manager RJ-45 Ethernet Connector 2
192.168.3.2	Failover File Manager PCI 10/100 NIC

a. This is the default IP address to use for configuring the MEDIASwitch initially. Change this IP address to comply with your specific IP addressing conventions when configuring the MEDIASwitch for use in your network.

Setting Up the IP Addresses

⚠ **Before you continue, select one File Manager to act as the Primary File Manager and one to act as the Failover File Manager. It is important that you make this determination, as the next several sets of instructions are structured to perform specific configuration operations on either the Primary or Failover File Manager.**

To set the IP addresses on the File Managers:

1. Right-click the Network Neighborhood icon on the desktop and then click Properties. The Network dialog box appears.

2. Make sure that there is a name entered in the Computer Name text box.

   • If it is blank, you need to enter a name.

   • If the name is set to Avid, you need to change it.

▤ *Make sure that you enter a unique computer name for each File Manager.*

3. Make sure that there is a name in the Domain text box and that it is correct if you are connecting to an in-house network.

4. Click the Protocols tab.

5. Click TCP/IP Protocol.

6. Click the Properties button. The Microsoft TCP/IP Properties dialog box appears.

7. Choose the RJ-45 Ethernet Connector 2 from the Adapter pull-down list.

8. Click Specify an IP address and type the first IP address from the list of six addresses that you obtained for this configuration. (This port is used to connect to the Ethernet hub and therefore requires an appropriate IP address.)

9. Press Enter. The Subnet Mask field should fill with the subnet mask for the IP address. Make sure the subnet mask is 255.255.255.0. If any other subnet mask appears, change it to the correct mask value.

10. If you plan to connect the File Manager to a subnet on your network, click the DNS tab and type a DNS server IP address into the DNS Service Search Order text box.

11. If you plan to connect the File Manager to a subnet on your network, click the WINS Address tab and type the IP addresses for a primary and secondary WINS server into the appropriate text box.

12. Click the Apply button.

13. Choose the RJ-45 Ethernet Connector 1 in the Adapter pull-down list.

14. Click Specify an IP address and type the second IP address from the list of addresses that you obtained for this configuration.

15. Press Enter. The Subnet Mask field should fill with the subnet mask for the IP address. Make sure the subnet mask is 255.255.255.0. If any other subnet mask appears, change it to the correct mask value.

16. If you plan to connect the File Manager to a subnet on your network, click the DNS tab and type a DNS server IP address into the DNS Service Search Order text box.

17. If you plan to connect the File Manager to a subnet on your network, click the WINS Address tab and type the IP addresses for a primary and secondary WINS server into the appropriate text box.

18. Choose the Primary File Manager PCI 10/100 NIC in the Adapter pull-down list.

19. Click Specify an IP address and type the third IP address from the list of addresses that you obtained for this configuration.

20. Press Enter. The Subnet Mask field should fill with the subnet mask for the IP address. Make sure the subnet mask is 255.255.255.0. If any other subnet mask appears, change it to the correct mask value.

21. If you plan to connect the File Manager to a subnet on your network, click the DNS tab and type a DNS server IP address into the DNS Service Search Order text box.

22. If you plan to connect the File Manager to a subnet on your network, click the WINS Address tab and type the IP addresses for a primary and secondary WINS server into the appropriate text box.

23. Click the Apply button.

24. Reboot the File Manager.

25. Repeat steps 1 to 24 for the second File Manager, using the fourth through sixth IP addresses from the list of addresses. See Table 4-1 on page 4-7.

CHAPTER 5

Installing the MediaNet File Manager Software

The File Manager software sets up and manages the files that are stored on the MediaNet workgroup. This software is supplied on a CD-ROM in the MediaNet installation kit.

MediaNet File Manager Software Installation

Use the following procedure to install the MediaNet File Manager software needed to operate your MediaNet workgroup.

⚠ **You must install the MediaNet File Manager software to the D: partition — there might not be sufficient free space on the C: partition to completely save a local copy of the MediaNet file system metadata.**

To install the MediaNet software on the File Manager:

1. Locate the MediaNet CD-ROM.

2. Locate and attach the application key to the File Manager.

3. Insert the CD-ROM into the File Manager CD-ROM drive. The CD-ROM is set to automatically start and opens the MediaNet Installation window. This will take approximately 30 seconds.

   If the CD-ROM does not automatically start, start the installation manually as follows:

   a. Double-click My Computer on the desktop. The My Computer window opens.

   b. Right-click the CD-ROM icon and choose AutoPlay. The MediaNet Installation window opens.

4. Click Product Installers. The screen changes to show the available products you can install.

5. Click MediaNet Components. The screen changes to show the available MediaNet component installers.

6. Click Install File Manager. The InstallShield Wizard dialog box appears showing the Welcome screen.

7. Accept the default values presented by the InstallShield Wizard until the Setup Status screen appears. It shows the installation progress.

The destination location for the software installation should default to the location where the previous release was installed.

8. On the InstallShield Wizard Complete screen, click "Yes, I want to restart my computer now."

9. Click Finish to complete the installation of the File Manager software and reboot the File Manager.

UPS Monitoring Software

If you have Avid-supplied UPSs, you can have the File Manager monitor the UPS to determine when a power interruption occurs. Appendix B provides complete instructions for installing and configuring the UPS monitoring software.

Configuring the MediaNet Software

You need to configure the MediaNet software to establish a functioning MediaNet workgroup or Trilligent Cluster. This configuration requires that you:

- Create a drive set

- Create an allocation group

- Create a workspace

- Create user accounts

While you are performing the configuration, you will need to refer to the *Avid Unity MediaNet Management Guide* for information about the MediaNet configuration tools. You should also read the first two chapters of the guide. They describe the MediaNet software and the tools.

CHAPTER 6

Installing the Trilligent File Manager Software

The Trilligent File Manager software sets up and manages the files that are stored on the Trilligent Storage subsystem. This software is supplied on a CD-ROM in the MediaNet installation kit.

Trilligent Cluster File Manager Software Installation

Use the following procedure to install the MediaNet File Manager software needed to operate your Trilligent Cluster.

⚠ **You must install the Trilligent File Manager software to the D: partition — there might not be sufficient free space on the C: partition to completely save a local copy of the Trilligent file system metadata.**

To install the Trilligent software on the File Manager:

1. Locate the MediaNet CD-ROM.

2. Locate and attach the application key to the File Manager.

3. Insert the CD-ROM into the File Manager CD-ROM drive. The CD-ROM is set to automatically start and opens the MediaNet Installation window. This will take approximately 30 seconds.

   If the CD-ROM does not automatically start, start the installation manually as follows:

   a. Double-click My Computer on the desktop. The My Computer window opens.

   b. Right-click the CD-ROM icon and choose AutoPlay. The MediaNet Installation window opens.

4. Click Product Installers. The screen changes to show the available products you can install.

5. Click Trilligent Components. The screen changes to show the available Trilligent component installers.

6. Click Install File Manager. The InstallShield Wizard dialog box appears showing the Welcome screen.

7. Accept the default values presented by the InstallShield Wizard until the Setup Status screen appears. It shows the installation progress.

The destination location for the software installation should default to the location where the previous release was installed.

8. On the InstallShield Wizard Complete screen, click "Yes, I want to restart my computer now."

9. Click Finish to complete the installation of the File Manager software and reboot the File Manager.

UPS Monitoring Software

If you have Avid-supplied UPSs, you can have the File Manager monitor the UPS to determine when a power interruption occurs. Appendix B provides complete instructions for installing and configuring the UPS monitoring software.

Configuring the MediaNet Software

You need to configure the MediaNet software to establish a functioning MediaNet workgroup or Trilligent Cluster. This configuration requires that you:

- Create a drive set

- Create an allocation group

- Create a workspace

- Create user accounts

While you are performing the configuration, you will need to refer to the *Avid Unity MediaNet Management Guide* for information about the MediaNet configuration tools. You should also read the first two chapters of the guide. They describe the MediaNet software and the tools.

APPENDIX A

File Manager and Storage Specifications

The following sections provide the dimensions and weight, the environmental, the electrical, and the power cord specifications for the components in the MediaNet environment.

Dimensions and Weight

Table A-1 shows the dimensions and weight for the File Manager, the KMM, the KVM, the MEDIArray II drive enclosure, the MEDIASwitch, and the Ethernet hub.

Table A-1   Component Dimensions and Weight

Component	Height	Width	Depth	Weight
File Manager	3.46 in (88 mm)	16.75 in (426 mm)	28 in (711 mm)	51 lb (23.1 kg)
KMM	1.75 in (44 mm)	17 in (430 mm)	21 in (533 mm)	30 lb (13.6 kg)
KVM 8-port	1.75 in (44 mm)	15.40 in (391 mm)	9 in (229 mm)	6 lb (2.8 kg)
KVM 16-port	3.50 in (89 mm)	15.40 in (391 mm)	9 in (229 mm)	8 lb (3.8 kg)
Drive enclosure	5.22 in (132.5 mm)	17.50 in (444 mm)	20 in (508 mm)	60 lb (27 kg) empty 127 lb (58 kg) full[a]
	1.75 in (44 mm)	17.50 in (444 mm)	21.25 in (540 mm)	17 lb (7.7 kg)
Ethernet hub	1.7 in (44 mm)	17.3 in (440 mm)	6.8 in (173 mm)	5 lb (2.27 kg)

a. Fully configured with two power supplies, two I/O modules, and fourteen MEDIArray II drives.

Environment

Table A-2 shows the environmental specifications for the File Manager, the KMM, the KVM, the MEDIArray drive enclosure, the MEDIASwitch, and the Ethernet hub.

Table A-2   Environmental Specifications

Component	Operating Temperature	Operating Humidity	Storage Temperature	Storage Humidity
File Manager	50°F to 95°F (10°C to 35°C)	10% to 80% noncondensing	-40°F to 158°F (-40°C to 70°C)	5% to 95% noncondensing
KMM	50°F to 104°F (10°C to 40°C)	20% to 80% noncondensing	9°F to 158°F (-25°C to 70°C)	10% to 90% noncondensing
KVM	32°F to 122°F (0°C to 50°C)	10% to 80% noncondensing	0°F to 158°F (-17°C to 70°C)	5% to 90% noncondensing
Drive enclosure and drives	50°F to 104°F (10°C to 40°C)	20% to 80% noncondensing	–40°F to 149°F (–40°C to 65°C)	10% to 90% noncondensing
	32°F to 104°F (0°C to 40°C)	5% to 95% noncondensing	–40°F to 176°F (–40°C to 80°C)	5% to 95% noncondensing
Ethernet hub	32°F to 122°F (0°C to 50°C)	0% to 95% noncondensing	0°F to 149°F (-17°C to 65°C)	0% to 95% noncondensing

Electrical

Table A-3 shows the electrical specifications for the File Manager, the KMM, the KVM, the MEDIArray II drive enclosure, the MEDIASwitch, and the Ethernet hub.

Table A-3   Electrical Specifications

Component	Voltage	Frequency	Watts (Max. U.S.)
File Manager	115 or 230 V ac	50 to 60 Hz	300 W
KMM	100 or 240 V ac	50 to 60 Hz	10 W
KVM	115 or 230 V ac	50 to 60 Hz	20 W
Drive enclosure	100 to 240 V ac	47 to 63 Hz	400 W[a]
	100 to 250 V ac	50 to 60 Hz	47 W
Ethernet hub	100 to 240 V ac	50 to 60 Hz	10 W

a. Fully configured with two power supplies, two I/O cards, and 14 MEDIArray II drives.

Power Cords

Select the power cords for the MediaNet environment hardware according to the country destination; it must comply with local safety requirements.

Use the following guidelines to replace the original cord set:

• **CEE-22 requirements:** The female receptacle of the cord set, shown in Figure A-1, must comply with CEE-22 requirements.
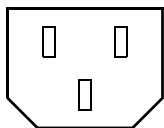
Figure A-1   Receptacle (CEE-22)

• **United States and Canada requirements:** In the United States and
  Canada, the male plug is a NEMA 5-15P style and is UL listed and
  CSA certified. Figure A-2 shows the plug. SVT cordage can be
  used with desktop, countertop, or rack-mounted units; all other
  equipment requires SJT cordage. Only SJT-type cord sets can be
  used for units that sit on the floor.

  Select the cord set according to the current rating of your unit. See
  Table A-4 for the selection criteria for power cords in the United
  States and Canada.
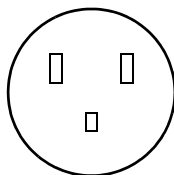
Figure A-2   NEMA 5-15P Style Plug

• **European countries requirements:** In Europe, use only an
  H05VV-F, <HAR>, VDE, PVC, 3 x 1.00 mm^2 power cord. Für den
  Gebrauch in Deutschland muß ein Netzkabel des Typs H05VV-F,
  <HAR>, PVC, Größe, 3 x 1.00 mm^2 verwendet werden.

Table A-4   Power Cord Requirements

Size of Conductors in Cord			Maximum Current Rating of Unit	
Cord Type	U.S./Canada	Europe	U.S./Canada	Europe
SJT	16 AWG	3 x 1.00 mm^2	12 A	10 A
SVT	18 AWG	NA[a]	10 A	NA
SVT	17 AWG	NA	12 A	NA

a. NA – Not applicable.

UPS Power Cord

The Avid-supplied UPS has special power cord requirements. Use the following guidelines to replace the original cord set on the UPS:

*   **United States and Canada requirements:** In the United States and Canada, the male plug is a NEMA L5-30P style and is UL listed and CSA certified.

*   **Worldwide requirements:** The UPS ships with a replaceable power cord and the male plug is an IEC C-20 style. The power cord and plug are UL listed and CSA certified. Figure A-3 shows the plug.
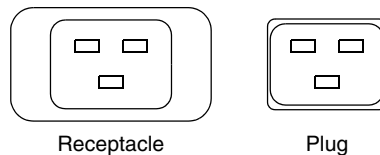
Receptacle   Plug

Figure A-3   IEC C-20 Style Plug and Receptacle

APPENDIX B

Installing UPS Monitoring Software

Each Best Power™ Fortress® Model 2250 uninterruptible power supply (UPS) ships with the following items:

- *Fortress Safety Information* (multiple languages)

- *Fortress User Guide* (multiple languages)

- A CheckUPS II CD-ROM

- A 9-pin RS-232 serial communication cable

These notes describe how to install the communication cable, and how to install and configure the Best Power CheckUPS II® monitoring software.

The communication cable allows the CheckUPS software, running on the File Manager, to monitor the Fortress 2250 UPS. The cable and the monitoring software ensure that the File Manager is shut down at a specified time after a power outage.

Installing the Serial Cable

To install the serial cable:

1. Locate the serial cable that came with the UPS. This is a special cable. You cannot substitute another serial cable.

2. Attach the male end of the cable to the Communications connector on the back of the UPS. Secure the cable with the thumbscrews that are part of the connector.

3. Attach the female end of the cable to the COM1 serial port on the back of the File Manager. Secure the cable with the thumbscrews that are part of the connector.

Installing the CheckUPS II Software

To install the CheckUPS II software:

1. Locate the CheckUPS II CD-ROM in the Best Power kit.

2. Load the CD-ROM into the File Manager CD-ROM drive. The CD-ROM autostarts Internet Explorer and the Welcome to CheckUPS II Software Suite screen appears.

3. Click the Click Here to Get Started link. The Table of Contents screen appears.

4. Click the CheckUPS II Software link. The CheckUPS II Software screen appears.

5. Click the Windows button. The CheckUPS II Suite for Windows screen appears.

6. Click the NT/2000 button. The CheckUPS II Suite for Windows NT/2000 screen appears.

7. Scroll down to the NT/2000 Suite Advanced button.

8. Click the Advanced button. The File Download dialog box appears.

9. Click Save this program to disk.

10. Click OK. The Save As dialog box appears.

11. Click Save to accept the default name and save the file to the desktop.

12. Click Close.

13. Exit Internet Explorer.

14. Double-click ChkAdvNT on the desktop. The CheckUPS II Suite for NT/2000 Setup dialog box appears at the Welcome screen.

15. Click Next. The Information screen appears with the copyright and software description information.

16. Click Next to accept the terms of the copyright. The Choose Destination Location screen appears.

17. Click Next to accept the default installation location. The Setup Type Selection screen appears.

18. Click CheckUPS II Advanced and Data Server in the list.

19. Click Next. The Start Copying Files screen appears.

20. Click Next. The Setup Status progress bar shows the files being copied to the destination location. When complete, the InstallShield Wizard Complete screen appears.

21. Make sure the checkbox for Yes I want to view the CheckUPS Help files now is *not* checked.

22. Click Finish to complete the software installation.

23. Reboot the File Manager.

Configuring the CheckUPS II Software

To configure the CheckUPS II software:

1. Click Start, point to Settings, and then click Control Panel.

2. Double-click the Check UPS II Advanced control panel. The CheckUPS II Advanced control panel opens.

3. Click the UPS Monitoring tab.

4. In UPS Connection, set Type to serial and set Name to COM1.

5. Make sure that a check appears in the following checkboxes:

   • Enable Event Logging

   • Enable User Messaging

6. Click the Event Action tab.

7. Make sure that a check appears in the Enable Operating System Shutdown checkbox.

8. Set the shutdown time to 1 minute after the power failure.

9. Make sure that a check appears in the Enable UPS Shutdown Time check box.

10. Set the shutdown time to 3 minutes.

11. Make sure that a check appears in the Restart UPS checkbox. This restarts the UPS when power returns.

12. Click Apply and then click OK.

13. In the Control Panel window, double-click Services. The Services window opens.

14. Locate and click the CheckUPS II Advanced service.

15. Click the Startup button. The Service dialog box appears.

16. In Startup Type, click Automatic.

17. Click OK to close the dialog box and save the change.

18. In the Services dialog box, click the Close button.

19. Reboot the File Manager.

20. After the File Manager reboots, a message appears, stating Connection Established With Fortress.

21. Click OK.

22. A second message appears, stating UPS Monitoring Started.

23. Click OK. The CheckUPS II Advanced configuration and startup is complete.

While the Check UPS II Advanced service is set to Automatic, the UPS monitoring restarts each time that you reboot the File Manager. You'll need to dismiss the two startup messages after each reboot.

You can test that the CheckUPS II Advanced software is working by unplugging the UPS from its power source. The File Manager shuts down after five minutes.

⚠ **Only test the UPS and File Manager shut down when others are not using the MediaNet environment. Shutting down the File Manager keeps MediaNet clients from using the media files on the MediaNet storage.**

APPENDIX C

Regulatory and Safety Notices

FCC Notice

The devices listed in this documentation comply with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference.

2. This device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Canadian ICES-003

This Class A digital apparatus meets all requirements of the Canadian Interference Causing Equipment Regulations.

Cet appareil numérique de la classe A respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

European Union Notice

CE **Declaration of Conformity**
(According to ISO/IEC Guide 22 and EN 45014)

Application of Council Directives:	73/23/EEC, 89/336/EEC.
Standards to which Conformity is Declared:	EN60950:1992 + A1 + A2 + A3 + A4 + A11 CISPR 22:1985 / EN55022:1988 Class A EN55024:1998 + A1
Manufacturer's Name:	Avid Technology, Inc. 1925 Andover Street Tewksbury, MA 01876, USA
European Contact:	Nearest Avid Sales and Service Office or Avid Technology International B.V. Sandyford Business Center Unit 3, Dublin 18, Ireland
Type of Equipment:	Information Technology Equipment

Product Name: Products for the Windows NT Operating System: Media Composer, Film Composer, Avid Xpress, Avid Xpress DV, Avid Unity, Avid | DS, NewsCutter, NewsCutter XP, NewsCutter DV, Symphony

Products for the Macintosh Operating System: Media Composer, Film Composer, Avid Xpress, Avid Unity

Products for the UNIX Operating System: AirPlay, VideoSPACE

Base Model Numbers: None

Product Options: All

Year of Manufacture: 2002

(1) Products for the Windows NT Operating System: products were tested in a typical Media Composer, Film Composer, Avid Xpress, Avid Xpress DV, Avid Unity, Avid | DS, NewsCutter, NewsCutter XP, NewsCutter DV, or Symphony configuration.

(2) Products for the Macintosh Operating System: products were tested in a typical Media Composer, Film Composer, Avid Xpress, or Avid Unity configuration.

(3) Products for the UNIX Operating System: products were tested in an AirPlay or VideoSPACE configuration.

I, the undersigned, hereby declare that the equipment specified above conforms to the above Directives and Standards.

George R. Smith, Director of Hardware Engineering.

Australia and New Zealand EMC Regulations

N1709
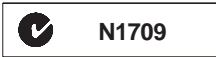
John Kells, Australian Operations Manager
Avid Technology (Australia)
Unit B
5 Skyline Place
French Forest NSW 2086
Australia
Phone: 61-2-8977-4800

Taiwan EMC Regulations

Taiwan EMC Regulations BSMI Class A EMC Warning

警告使用者:
這是甲類的資訊產品,在居住的環境中使
用時,可能會造成射頻干擾,在這種情況
下,使用者會被要求採取某些適當的對策。