PC MAC LAN

FOR WINDOWS NT

User's Manual

Miramar wishes to acknowledge the input and feedback of our customers which played a significant role in the contents of this manual as well as the feature sets and improvements in our products. We here at Miramar value our customers and any syggestions you may have for this product and future related products are appreciated.

Table of Contents

Chapter One

Getting Started

Welcome to PC MACLAN for Windows NT, Miramar Systems' software package that lets you access an AppleTalk LAN from a Windows NT system. This chapter tells you how to use this manual to get your network up and running.

Topics include:

Manual Contents

How to Use This Manual

Technical Support

Online Help

Manual Contents

Chapter 1 Getting Started: Gives an overview of the manual and tells you how to use online help and obtain technical support.

Chapter 2 About PC MACLAN for Windows NT: Gives an overview of local area networks (LANs), and describes PC MACLAN components and features.

Chapter 3 Installing PC MACLAN for Windows NT: Describes hardware and software requirements for using PC MACLAN, what you need to know before you begin installation, and how to install the software.

Chapter 4 Setting Up PC MACLAN Client: Provides step-by-step instructions for accessing PC MACLAN Client file and print services.

Chapter 5 Setting Up PC MACLAN File Server: Provides step-by-step instructions for setting up PC MACLAN File Server.

Chapter 6 Setting Up PC MACLAN Print Server: Provides step-by-step instructions for setting up PC MACLAN Print Server and explains how to use a printer connected to the network.

Chapter 7 Using PC MACLAN Client: Explains how to display, access and copy shared files using PC MACLAN Client.

Chapter 8 Using PC MACLAN File Server: Explains how to use the PC MACLAN File Server, and how to display and access shared files.

Chapter 9 Using a Macintosh with PC MACLAN: Provides step-by-step instructions for setting up your Macintosh network, logging on, and using shared files.

Appendices: Provide supplementary technical information.

Glossary: Defines terms that relate to the use of PC MACLAN.

How To Use This Manual

This manual assumes you are familiar with the Windows NT operating system.

We recommend that you start by reading Chapter 2. This chapter describes local area networks and the role of each network component. It also describes PC MACLAN components and features. For the experienced user, this chapter is important because it tells you how PC MACLAN software functions in the network environment.

Technical Support

Before requesting technical support, be sure to look at the *Welcome.doc* file for last minute changes, and check Appendix A for troubleshooting tips and tricks.

Technical support is available by phone or on the internet.

Phone: (805) 965-5161

Bulletin Board: (805) 963-6951

Internet: http://www.miramarsys.com

Please be prepared to provide the following information:

1. Your name, company name, phone, fax, and email
2. PC MACLAN serial number
3. NT system make, model, processor type and speed
4. Windows NT version and service pack installed
5. Peripherals:

    Video card, driver and resolution

    CD-ROM port I/O address and IRQ or INT interrupt

    Sound card port I/O address and IRQ or INT interrupt

6. Windows NT network:

    Network adapter make, model, and speed

    Network adapter port I/O address

    Network adapter IRQ or INT interrupt

7. AppleTalk LAN:

> Operating system version number
>
> AppleTalk version number
>
> Adapter or router make and model
>
> Number of Macs on the network

8. A detailed description of the problem

Online Help

Opening Online Help

There are two ways to open online help for the PC MACLAN file server or print server. You can:

- Click the help icon located near the upper-right corner of the PC MACLAN window.

- Open the Help pull-down menu located in the upper-right corner of the PC MACLAN window and select the help item you want to open.

To open the main Help table of contents for PC MACLAN client, go to PC MACLAN from the Start Menu and select PC MACLAN Online Help.

When help is open, you can browse through the help information and print any topic. To display information about a topic, double-click its title.

Help Window Buttons

The buttons at the top of the help window present a variety of ways to locate information. An explanation of each button is listed below:

Contents   Displays a table of contents from which to choose.

Find   Allows you to locate a topic by a keyword

Back   Allows you to go back to the previously displayed topic.

Print   Lets you print the current help topic.

Left arrow **Right-arrow**	Allows you to move backward and forward through the Help topics.
Glossary	Displays a list of terms and their meanings.

Dialog Box Help   Every PC MACLAN window contains a Help button. When you click the Help button, information is displayed for the specific items in the window. You can then use the buttons at the top of the Help window to locate other help information topics.

PC MACLAN Client Online Help

Because PC MACLAN Client is an integrated part of the Windows NT Network Neighborhood, there is no separate Client window. Therefore, online help is provided as an item in the program folder.

Chapter Two
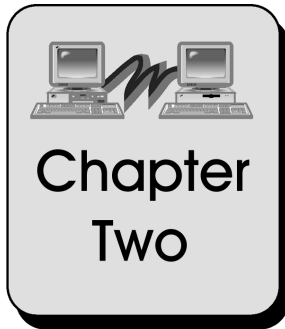
About PC MACLAN for Windows NT

This chapter describes local area networks (LANs) and the features of PC MACLAN for Windows NT.

Topics include:

> What is a LAN?
>
> A local area network using PC MACLAN
>
> Network Components
>
> PC MACLAN Components
>
> File Names and Properties
>
> File Access Privileges
>
> File Extension Mapping

What is a LAN?

A local area network (LAN) is a group of computers connected to each other by cables, and also to peripherals like printers and scanners so that users can share resources on the network. When your computer is part of a network, you can share files, folders, disk drives and printers with others on the network.
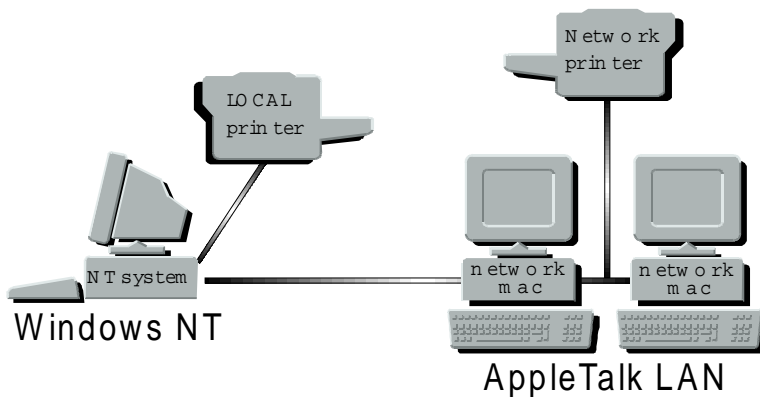
Figure 2-1

A Local Area Network Using PC MACLAN

PC MACLAN lets a computer running Windows NT function as an AppleShare **client**, an AppleShare **file server,** and an AppleTalk **print server** when connected to an AppleTalk LAN. In addition, PC MACLAN print services take advantage of advanced AppleTalk printer features.

Network Components

This section describes the hardware and software components of a typical LAN.

Adapter A hardware device that physically connects a computer to a network.

AppleTalk The protocol that computers on an AppleTalk LAN use to communicate. AppleTalk comes with Macintosh computers. It is provided for the PC as part of the PC MACLAN software.

Client A computer that has access to services on a network. The user of a client computer requests services, such as file access, from a file server. The software that makes your PC a client is included with PC MACLAN.

File Server A computer that provides file services such as file transfer or storage across a network. The software that makes your NT system a file server is included with PC MACLAN.

Print Server A computer that provides printing services across a network and accepts print jobs from other computers. The software that makes your NT system a print server is included in the PC MACLAN program.

Protocol The languages computers use to communicate with each other.

PC MACLAN Components

This section describes the components of PC MACLAN. You access the client portion of PC MACLAN through the Network Neighborhood. Unless you designate otherwise, the program menu item created by the installer is called **PC MACLAN**. When you open this item you see the following components:

- AppleTalk Settings
- File Server
- Gator Pro
- PC MACLAN Online Help
- Print Server

PC MACLAN Client

The client portion of PC MACLAN lets your Windows NT system copy files to and from an AppleTalk File Server. It also lets you print to AppleTalk printers on the network.

The client portion of PC MACLAN uses the Network Neighborhood for setup, and is completely integrated with the built-in networking of Windows NT, so you won't see a program item for PC MACLAN client in the PC MACLAN program list.

When you install the client portion of PC MACLAN, AppleTalk Messenger is set to run automatically from the registry. AppleTalk Messenger allows the AppleTalk file server to send messages to your Windows NT system. For example, if the AppleTalk file server is about to shut down, a message displays on your monitor to let you know how many minutes you have until it does.

PC MACLAN File Server

The file server portion of PC MACLAN lets the Windows NT system emulate an AppleShare file server. As a result, you can share files with the Macintosh computers and other AppleShare clients on the LAN via a shared directory, hard drive, diskette drive, or other attached media. You can have a maximum of ten client connections.

The file server portion of PC MACLAN is configured using the PC MACLAN Console. An example of the PC MACLAN Console window is shown here.
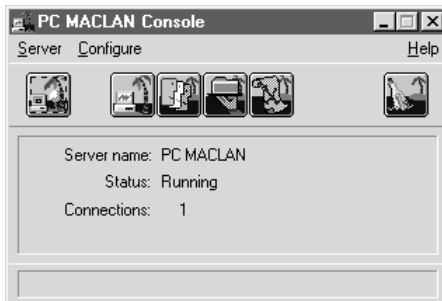
PC MACLAN Print Server

The print server portion of PC MACLAN turns the Windows NT system into an AppleTalk print server. As a result, you can share any printers connected to your Windows NT system with the Macintosh computers on the LAN or the WAN.

An example of the PC MACLAN Print Server window is shown here.
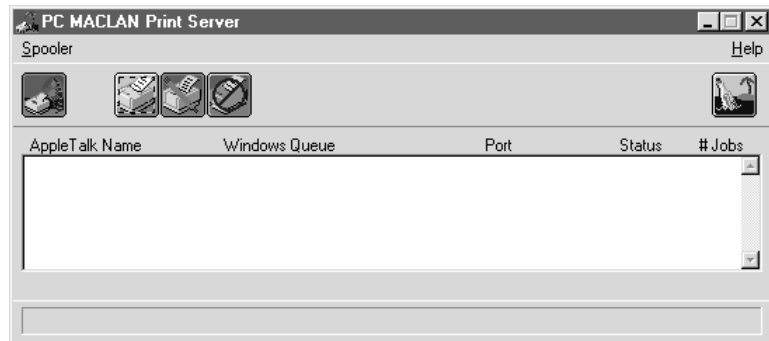
Gator Pro

The Gator Pro utility provides a way to display a list of all the devices on the AppleTalk LAN. The left panel of the window lists all the zones on the network. The right panel lists all the devices and their corresponding NBP (Name Binding Protocol) Device Type. For example, a Macintosh is listed as a Workstation, and an AppleTalk printer may be listed as a LaserWriter. You can use the Update buttons to refresh the displayed lists.

If the Filter checkbox is checked, and the Type field is set to "=", all devices in the currently selected zone are displayed. If a specific type is selected, only that type displays. If you select a device in the list, the network, node, and socket for the selected device displays. If you select a printer, the current status of the printer displays in the field next to the Query Printer field. You can refresh the status by clicking the button.

File Names and Properties

Once you have installed PC MACLAN and set up the client and/or server options, you can begin to share files between computers. However, there are some points to keep in mind about file names.

Number of Characters in a File Name

You should keep your shared file names to 31 characters. Windows NT lets you use up to 253 characters in a file name; the Macintosh allows up to 31. If you try to transfer a file with a name of more than 31 characters from your Windows NT computer to a Macintosh, you will receive an error message. Also keep in mind that many Windows NT applications add a .xxx extension to the file name. These characters are included in the total number of characters.

Characters not accepted by Windows NT

These characters \ / : ? " < > | cannot be used in a Windows NT file or folder name. If you transfer a Macintosh file that uses one of these characters in the name, PC MACLAN substitutes the ASCII code, enclosed in brackets, for the character ([047]), for example.

File Properties

The Windows NT Properties window, accessed by right-clicking on a file and selecting Properties, lets you to see information about a file that resides in a volume on a file server. You can use this feature to see the long name, type/creator and Macintosh icon for a file as well as other properties.

Access Privileges

On the NT system, you use the PC MACLAN File Server component to define access privileges. On the Macintosh, you use the Sharing dialog box. This section provides an overview of the different categories of access privileges.

The three types of users are:

Owner   The user/group who created or was assigned ownership of the folder.

Group   A set of users who need to share data.

Everyone Any user with access to the server.

Each of these three user categories can be assigned any combination access privileges for a shared directory (volume). However, only an owner can set or change access privileges. The access privileges are:

None   No file or directory operations are allowed.

See Folders   Lets the user or group see the folders in the folder for which access privileges are being set. The opening of additional folders within that folder is subject to the privileges defined for those folders.

See Files   Lets the user or group open, view and copy applications and files.

Make Changes   Lets the user or group edit, move, or delete the files in a folder.

For the Macintosh, the following rules apply:

- Access privileges are defined only for folders (directories), not for individual files.

- When a user creates a new folder on the network, that user becomes the owner. The owner is granted all privileges. Group and Everyone have no privileges unless the owner grants them.

- The folder's owner may be a member of a group associated with the folder, although this is not required.

- A folder can have its owner defined as Any User. This is the lowest possible security setting, giving any registered user or guest all privileges for the folder.

- Only the owner can change privileges for a folder. If the owner is a group, then any member of the group can change privileges for the folder.

File Extension Mapping

File Extension Mapping tells the PC MACLAN file server and client how to treat Windows files with various file name extensions so they will display properly on the Macintosh desktop.

In the Macintosh environment, a data file and its creator application are linked. If you create a document using Microsoft Word, the file appears on the desktop as an icon provided by Microsoft Word. When you open the file, Microsoft Word is automatically opened.

The Macintosh identifies the creator application with a 4-character code called a **file creator** that uniquely identifies the application that originated the file, and another 4-character code called a **file type** that identifies the type of file. For example, a Microsoft Word document has a file creator code of *MSWD* and a file type code of *W6BN*.

Windows NT identifies the creator application with a **file name extension**. For example, a Microsoft Word document has the file extension *.doc*. Extension mapping lets you tell Windows which file creator code and file type code to match with a particular Windows file name extension. Once the two codes and the file extension are mapped together, the file will display properly on both the Windows NT and Macintosh desktops.

For example, Excel creates spreadsheet files with the extension *.xls* on the NT system. In order to have these files appear correctly to a Macintosh user, the extension *.xls* must be added to the file extension mapping list and associated with the file creator *XCEL* and the file type *xls*.

A few common file types come pre-configured with PC MACLAN. These are displayed in the File Extension Mapping dialog box accessed from the PC MACLAN Console window. However, there may be times when you have to add, edit, delete or duplicate a file extension. This can be done using the file extension mapping dialog box or the AppleTalk property page.

Chapter Three
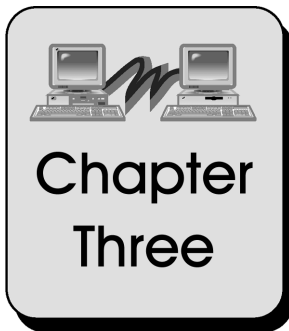
Installing PC MACLAN for Windows NT

This chapter describes how to install PC MACLAN for Windows NT.

Topics include:

> Types of Network Connections
>
> Software and System Requirements
>
> Printer Requirements
>
> Network Adapters and Drivers
>
> Network Cabling
>
> Pre-Installation Checklist
>
> Installing and Uninstalling PC MACLAN

Types of Network Connections

The Macintosh comes with the AppleTalk protocol installed, and the PC MACLAN program installs the AppleTalk protocol in your Windows NT system. As a result, both systems are able to communicate when connected to an AppleTalk network.

However, before your computers can communicate, they must be connected using the **same** type of network connection (unless you have a router or bridge).

The two types of networks available, each requiring a specific type of adapter and cabling, are Ethernet (EtherTalk) and Token-Ring (TokenTalk)

On many of the newer Macintosh computers, EtherTalk (Ethernet) connection hardware and software (adapters and drivers) are built into the computer. Therefore, you can connect to another Macintosh by simply plugging the EtherTalk cables and/or transceivers into the back of both computers. For TokenTalk (Token-Ring), you must install network adapters and drivers in each Macintosh computer before you can connect them to the network.

In the NT system, you will need to install either an Ethernet or Token Ring adapter along with the appropriate network hardware such as a terminator, if necessary (thinnet Ethernet), transceiver, and cabling.

Once you decide which type of network connection to use, you must make sure that the proper adapters and drivers are installed on <u>all</u> of the computers in the network. For example, if you want to use Ethernet (EtherTalk), you must install the necessary Ethernet (EtherTalk) hardware and software in all computers and then connect them using the appropriate Ethernet (EtherTalk) cables and/or transceivers.

Software and System Requirements

The following software and minimum system configuration is required to successfully install and operate PC MACLAN for Windows NT.

Windows NT System

- A 486 or Pentium microprocessor.
- Windows NT, Version 4.0 (workstation or server)
- 16 megabytes RAM
- Approximately 2.5 MB of free hard disk space
- Network adapter (see Network Adapters and Drivers) for Ethernet or Token-Ring
- Connecting cables for Ethernet or Token-Ring
- Printer drivers for the printers on the LAN
- Dialup Networking installed

Macintosh LAN

- A 680x0 or PowerPC Macintosh on an AppleTalk LAN:
- AppleShare 3.0 or later software, or Macintosh system 7.0 or 8.0 with file sharing enabled.
- LaserWriter driver 7.1.2 or 8.x.x (standard with all Macs)
- Network Adapter for EtherTalk or TokenTalk
- Connecting hardware for EtherTalk or TokenTalk

Printer Requirements

The Windows NT system using PC MACLAN can print to any LaserWriter or other AppleTalk printer connected to the network, or to a LaserWriter printer that is monitored by an AppleShare printer server or RIP. To use LaserWriter printers or other AppleTalk printers on your PC MACLAN network, you need to know the type of each printer you want to use, e.g., LaserWriter or DeskWriter.

You must have a Windows NT LaserWriter driver from Apple or a compatible Windows NT PostScript driver. The Apple LaserWriter II NT driver provided with Windows supports most of the features of Apple LaserWriter printers. Therefore, you might want to use this driver if you can't find the driver for your specific printer model.

Macintosh users can also use a Windows printer if it is PostScript-compatible, or if you have the correct drivers installed on the Macintosh. GDT (for the Mac) and Zenographics (for Windows) provide drivers for non-PostScript printers.

Network Adapters and Drivers

Setting up your network requires a **network adapter** (the hardware that physically connects the computer to the network) and an **adapter driver** (the software that allows the adapter to function) installed in both your Macintosh and Windows NT systems. The type of adapter and driver you use depends on your network type.

The Windows NT network driver setup uses NDIS (Network Device Interface Specification) drivers for Ethernet and Token-Ring networks. Any network adapter that uses this type of driver will function properly with PC MACLAN for Windows NT.

PC MACLAN installation for Windows NT assumes that your network adapter card for Ethernet or Token-Ring is already installed and properly set up. If your adapter card comes with a test utility, you should install the card in your computer, connect it to the network, and test the card before you install PC MACLAN.

Network Cabling

Cabling is used to physically connect the computers and printers in the network. The type of cable you use will depend on whether you are setting up an Ethernet (EtherTalk) or Token-Ring (TokenTalk) network. The appropriate cabling is illustrated below.

Ethernet (EtherTalk) Cabling
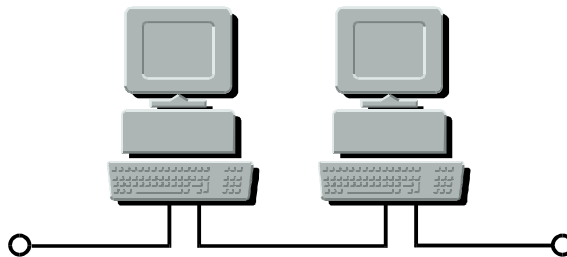
Thinnet (BNC) Ethernet requires a 50 Ohm terminator at each end of the cable unless a repeater is used.
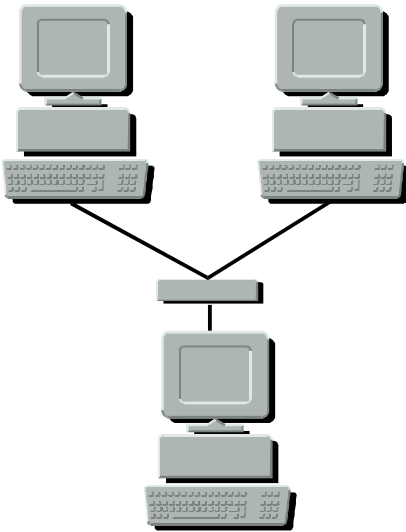
10 Base T Ethernet requires a hub. (If you are connecting two computers only, you may use a special cross-over cable instead. See Appendix A.)

Token-Ring (TokenTalk) Cabling

Token-Ring (TokenTalk) requires a MAU.

Pre-Installation Checklist

1. Is AppleTalk already installed?

If AppleTalk software from a vendor other than Microsoft is already installed on your Windows NT system, you must remove it before you install PC MACLAN. You should also remove applications that work with the previous version of AppleTalk because they will not work with the version PC MACLAN installs.

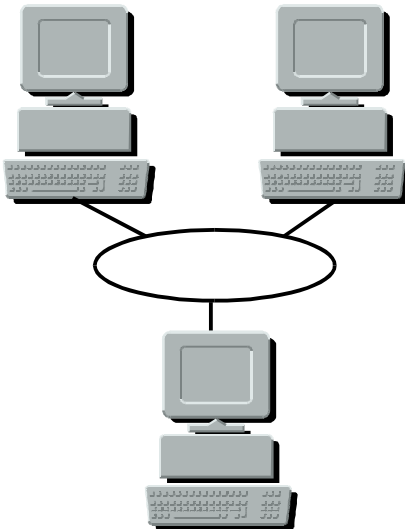### 2. What type of adapter do you have?

You will need to know the manufacturer name and model number of your network adapter card. Windows NT may determine the address settings of a "plug and play" adapter during installation. Older adapters may require you to know the I/O base address (port), interrupt (IRQ), DMA information and shared memory block address and size (if any) for successful installation.

3. Do you know your PC MACLAN serial number, the make and model of your router or adapter, and the makes, models, and names of the printers on the AppleTalk LAN?

MACLAN Serial No._____
Router/Adapter:_____
Printer 1:_____ Printer 2:_____
Printer 3:_____ Printer 4:_____

Installing and Uninstalling PC MACLAN

Installing PC MACLAN for Windows NT requires first adding the Miramar AppleTalk Protocol, then adding the Miramar services (client, file server, and print server).

To install PC MACLAN

1. **Log on to the NT system as an Administrator.**

2. **Exit all programs, and disable screen saver and virus protection programs.**

3. **Insert the PC MACLAN CD into your CD-ROM drive.**

4. **When the PC MACLAN window opens, click on the Add Software cube. The serial number window appears.**
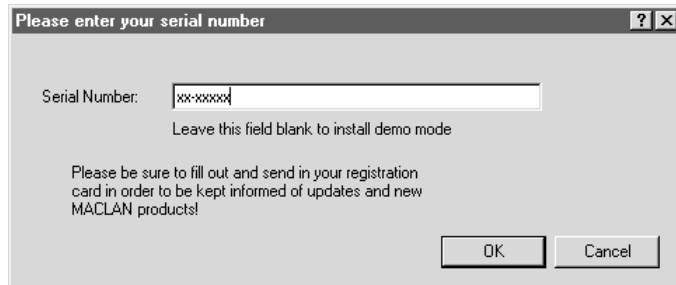
5. **Type in the serial number (located on the CD ROM envelope and on the back of this manual) and click OK.**
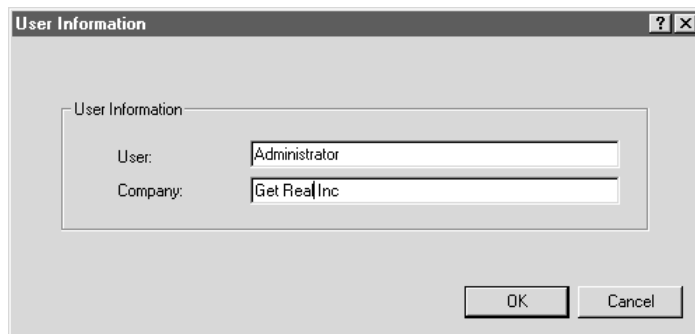
6. **In the User Information window, verify the user and company name and click OK.**

7. **In the Destination directory window, make sure the directory into which PC MACLAN will be installed is satisfactory and that you have enough program and system drive space, and click OK. The Network properties window opens.**
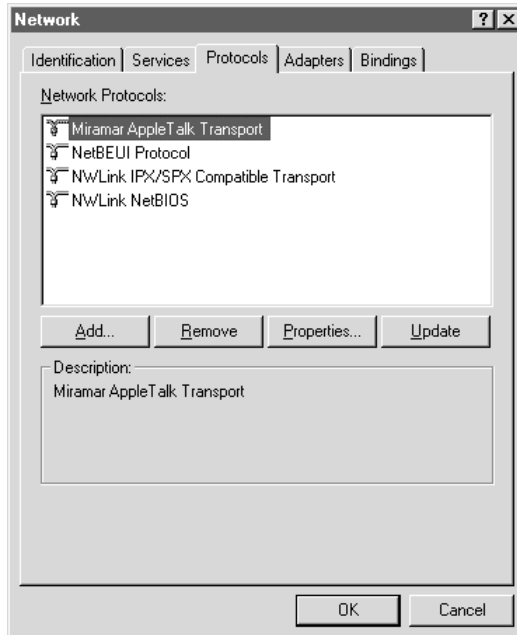
8. **Select the Protocols tab and click on Add.**
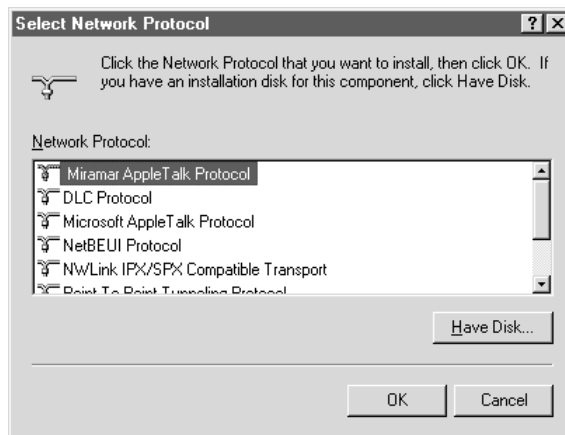
9. **In the Select Network Protocol window, make sure Miramar AppleTalk Protocol is selected, then click on OK. The necessary protocol files are copied and the Introducing PC MACLAN window is displayed.**

10. **Click on Close to close the window.**

11. **In the Network properties window, select the Services tab and click Add.**
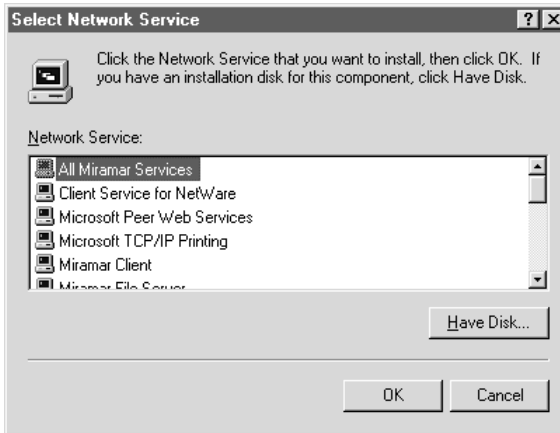
12. **In the Select Network Services window, make sure All Miramar Services is selected, and click OK. When the necessary files have been copied from the CD, Miramar's three services are listed in the window.**

> **Note:**
> You can add the three Miramar services (client, file server, and print server) by selecting them individually from the list. Miramar recommends that you add all the Miramar services at once.

13. **Close the Network properties window. The installation program takes a few seconds to update network settings, then asks if you want to restart your system.**
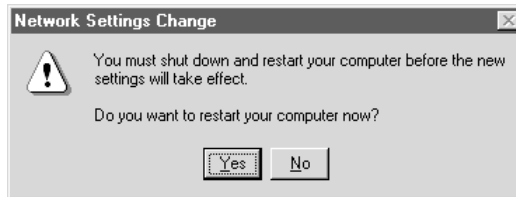
14. **Click on Yes to restart your system.**

To uninstall PC MACLAN

1. **In the Control Panel, double-click the Network icon.**

2. **When the Network properties window opens, click on the Services tab.**

3. **One at a time, select each of the Miramar services (client services, file server, and printer server and click Remove.**

6. **Select the Protocols tab, make sure Miramar AppleTalk Transport is selected, then click Remove.**

7. **Close the Network window. The system takes a few seconds to update network settings, then asks if you want to restart your system.**
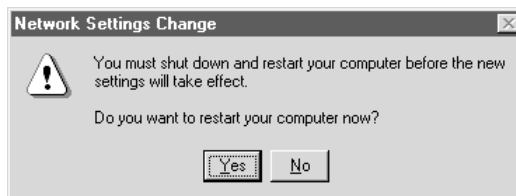
8. **Click on Yes to restart your system**
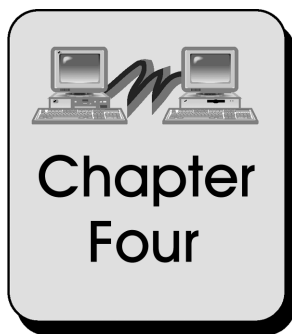
Setting Up
PC MACLAN Client

This chapter explains how to set up the PC MACLAN Client services which allow you to access AppleTalk file servers and printers from your Windows NT system.

Topics include:

> About PC MACLAN Client
>
> Logging On and Logging Off
>
> Mapping to a Network Drive
>
> Setting Up Client Print Services
>
> Viewing/Changing AppleTalk Printer Functions
>
> Creating/Viewing a Printer Log File
>
> Auto-Spooling Print Jobs from a Directory
>
> Changing Your Password
>
> Changing Your Zone

About PC MACLAN Client

PC MACLAN client lets you access the AppleTalk file servers and printers via the Network Neighborhood. As a result, you can share files (as a client) between your NT system and Macintosh LAN, and use printers that are on the AppleTalk network.

All of the options available for the client are set up using the features that come with the Windows NT Network Neighborhood. In other words, PC MACLAN provides an integrated network client. Therefore, there are no items listed in the PC MACLAN program group for the client portion of the PC MACLAN software.

The Universal Naming Convention (UNC) used to identify a MACLAN file server or print server on the network is as follows:

> File server = *zone name@file server name*
> Print server = *zone name`printer type\printer name*

Logging On and Logging Off

Once all of your computers and printers are connected physically (see Chapter 2), and the PC MACLAN program is installed (see Chapter 3), you need to complete two steps to log onto an AppleTalk file server as a client.

1. Turn on the AppleTalk file server (Macintosh computer) that is running Macintosh file sharing. This is the file server from which you will receive and send files. (See Chapter 9.)

2. Use the Windows NT Network Neighborhood to log onto the AppleTalk file server.

To log onto an AppleTalk file server

1. **Double-click the Network Neighborhood icon on your desktop.**

   The Entire Network icon, any computers in your workgroup, and any servers you are connected to will display.
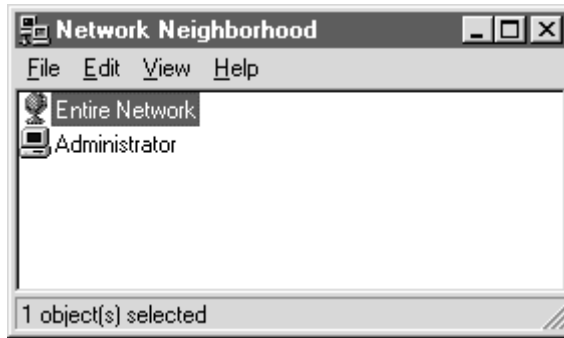
2. **To find the AppleTalk server, double-click the Entire Network icon.**

3. **Double-click the Miramar AppleTalk Network icon.**

   If AppleTalk zones are available on your network, zone names appears with the zone icon. When you double-click a zone, the file servers and printers available in that zone display in a new window. If your network does not use zones, only the icons for file servers and printers display in the Miramar AppleTalk Network window.

   Both situations are shown below:
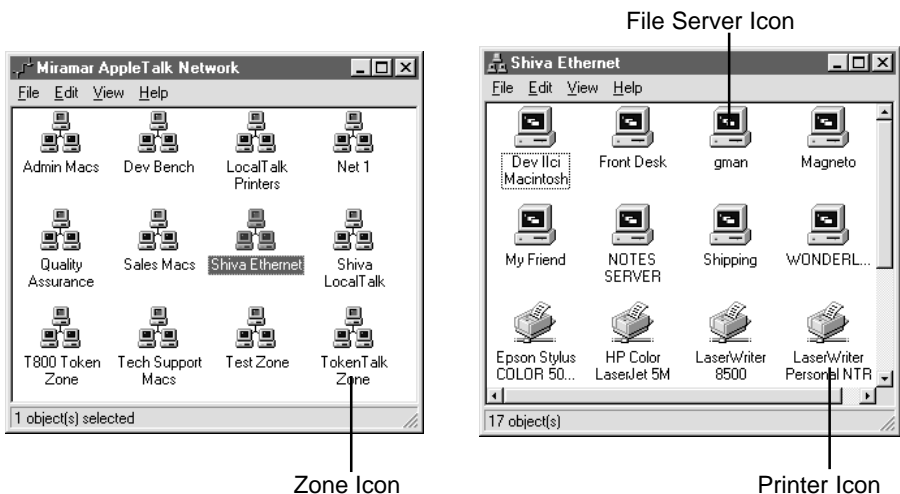
File Server Icon

Zone Icon   Printer Icon

3. **If you have zones, double-click the icon that represents the zone containing the AppleTalk file server you want to access. If you do not have zones, go to step 4.**

A window displays the contents, file servers and printers, contained in the zone.

4. **Double-click the individual icon for the AppleTalk file server you want to access.**

The Enter Network Password dialog box displays with your user name in the User Name field. The name of the file server is in the Resource field.
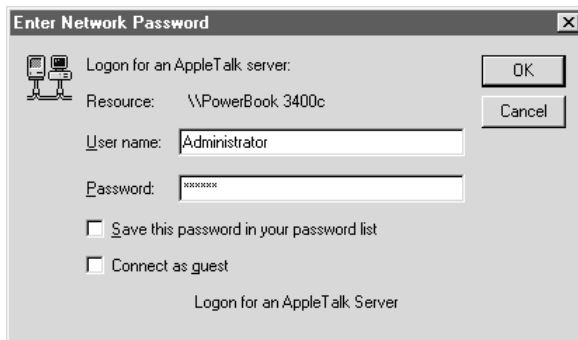
To be a registered user, you must enter a user name and password for the file server you selected. The user name and password you enter must be the same ones entered on the AppleTalk file server. If the server does not allow guest access, the "Connect as Guest" check box does not appear.

5. **Type your user name in the User name field, if it is not accurately displayed**

6. **In the password field, type your password <u>exactly</u> as it was set on the AppleTalk file server, matching both upper and lower case letters and spaces.**

Asterisks (*) appear as you type to protect your password from being seen by others.

7. **If you do not want to retype the password each time you log onto the selected AppleTalk file server, click the *Save this password in your password list* check box.**

8.   **Click the OK button.**

A window displays the volumes available in the selected AppleTalk file server. The name of the AppleTalk file server appears in the title bar of the window.

```
┌─────────────────────────────────────────────┐
│ 🖥 PowerBook 3400c              _ □ ✕         │
├─────────────────────────────────────────────┤
│ File  Edit  View  Help                       │
├─────────────────────────────────────────────┤
│ ☐ Additional Desktop Pictures                │
│ ☐ BrainWorks Demo                            │
│ ☐ Demo                                       │
│ ☐ Graphic Files                              │
│ ☐ ibm stuff                                  │
│                                              │
├─────────────────────────────────────────────┤
│ 5 object(s)                               // │
└─────────────────────────────────────────────┘
```
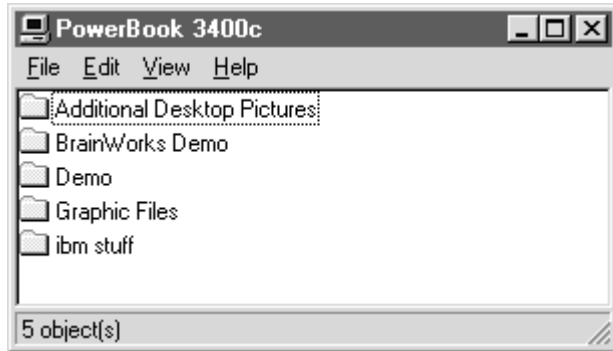
You may now access the files located on the AppleTalk server by double-clicking on the folder. For information about file names and file access privileges, see Chapter 2. You may also access the files using the Windows Explorer. The icon for the shared AppleTalk server is located within the Network Neighborhood.

To log off an AppleTalk file server

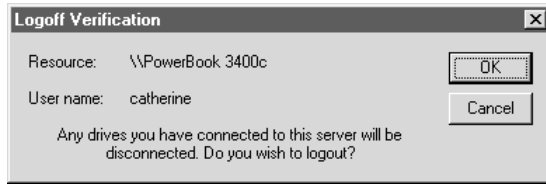1.   **Double-click the Network Neighborhood icon.**

The AppleTalk File Server you are logged onto should appear in the displayed list.

2.   **Click the AppleTalk file server icon with the right mouse button.**

A shortcut menu displays.

3.   **Click the Logout menu option.**

The Logoff Verification dialog box displays.

Logoff Verification	✕
Resource: \\PowerBook 3400c	OK
User name: catherine	Cancel
Any drives you have connected to this server will be disconnected. Do you wish to logout?	

4. **Click OK.**

You are logged off the AppleTalk file server and will have to log on the next time you want to access the server. In addition, any drives you have mapped to the server will be disconnected.

Mapping to a Network Drive

If you want a shared AppleTalk volume to display in Windows Explorer as a drive connected to your NT system, you can map the shared AppleTalk volume to a selected drive letter. Then, when you start the Windows NT Explorer, the shared volume will be displayed next to the designated drive letter.

> **You can map only one volume to one drive letter. If there are two shared volumes located on the same AppleTalk file server, you must map them individually.**

You may also disconnect the mapped drive at any time. Both procedures are listed below.

To map to a network drive

1. **If you just completed logging onto the file server, the volumes located on the file server should be displayed in a window titled with the file server's name.**

   If you closed the window, double-click the Network Neighborhood icon. Then double-click the AppleTalk file server you just logged onto.

The volumes included in the selected AppleTalk file server should now be displayed in a window.
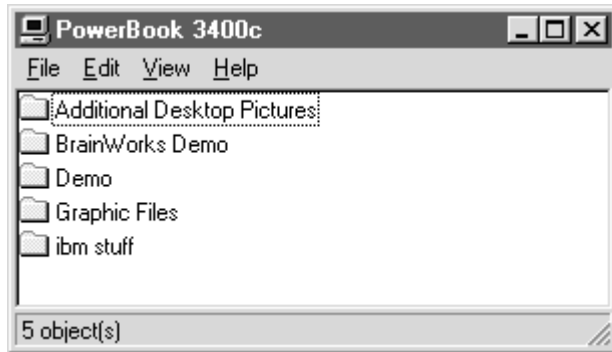
2. **Click the shared volume with the right mouse button.**

   A shortcut menu displays.

3. **Click the Map Network Drive option.**

   The Map Network Drive box displays.
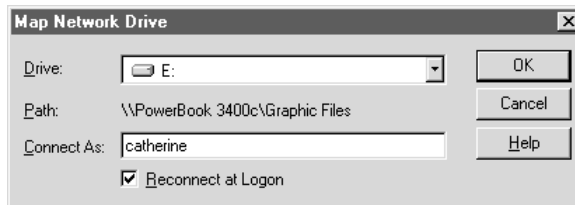
4. **In the Drive field, select a drive letter that is not in use. The volume name is already displayed in the Path field.**

   This is the drive that will be mapped to the AppleTalk file server. If you choose a drive that is already mapped to a drive or volume, the new drive or volume will replace the existing one.

5. **If you want the server to be connected automatically every time you start Windows, click the Reconnect at logon box.**

6. **Click OK.**

The contents of the mapped volume displays in a window. Now when you open the Windows Explorer, the shared AppleTalk file server volume displays as a separate drive in the list as well as a component in the Network Neighborhood.

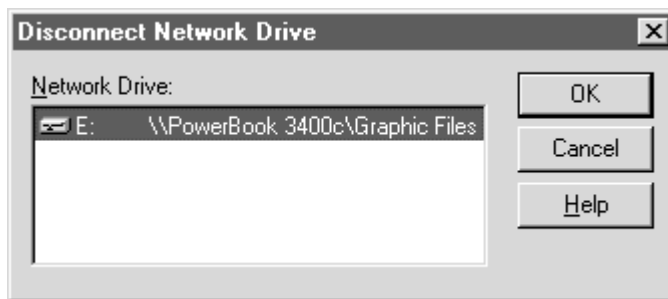## To disconnect a mapped network drive

1. **Click the Network Neighborhood icon with the right mouse button.**

   A shortcut menu displays.

2. **Click the Disconnect Network Drive option.**

   The Disconnect Network Drive dialog box displays.

3. **Click OK.**

   The AppleTalk file server is no longer mapped to the drive.

Setting Up Client Print Services

You may also use the Windows NT Network Neighborhood capabilities to set up the PC MACLAN print services that allow your Windows NT system to print to a printer connected to the AppleTalk network.
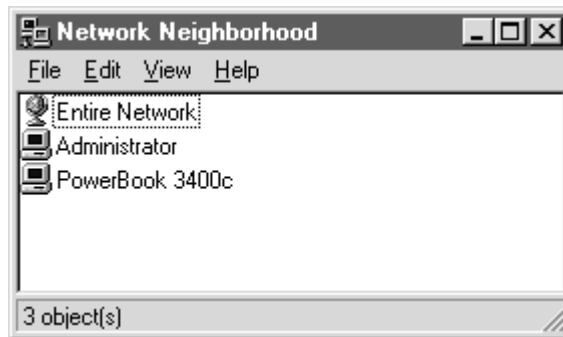
Before you setup PC MACLAN client print services, you need to:

- Know the make and model of your printer.
- Know the name of your printer.
- Make sure the printer is turned on and correctly connected to the network.
- (Optional) Know the AppleTalk printer "type" of your printer.

To set up the print client services

1. **Double-click the Network Neighborhood icon on your desktop.**

    The Entire Network icon, any computers in your workgroup, and any servers you are connected to or logged onto will display.

    ```
    ┌─────────────────────────────────────────┐
    │ 🖥 Network Neighborhood        _ □ X      │
    ├─────────────────────────────────────────┤
    │ File  Edit  View  Help                  │
    ├─────────────────────────────────────────┤
    │ 🖥 Entire Network                        │
    │ 🖥 Administrator                         │
    │ 🖥 PowerBook 3400c                       │
    │                                         │
    │                                         │
    ├─────────────────────────────────────────┤
    │ 3 object(s)                             │
    └─────────────────────────────────────────┘
    ```

2. **To find the AppleTalk printer, double-click the Entire Network icon, then on Miramar AppleTalk Network.**
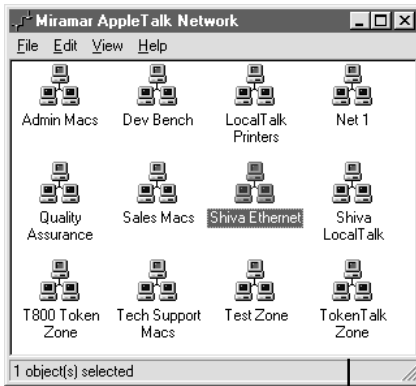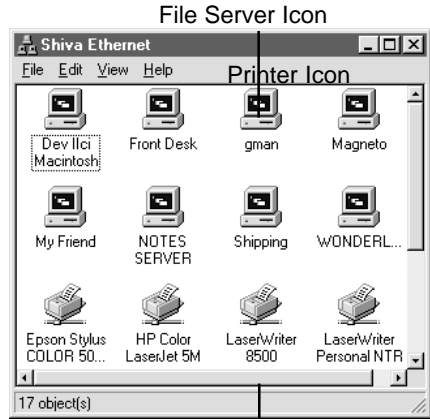
File Server Icon

Printer Icon

Zone Icon   Printer Icon

3. **If you have zones, double-click the icon that represents the zone containing the AppleTalk printer you want to access. If you do not have zones, go to step 4.**

A window displays the contents, file servers and printers, contained in the zone.

4. **Double-click the icon for the AppleTalk printer you want to access.**

5. **Follow the clearly defined instructions on each screen.**

If you are using a LaserWriter or any other PostScript printer, do not print a test page.
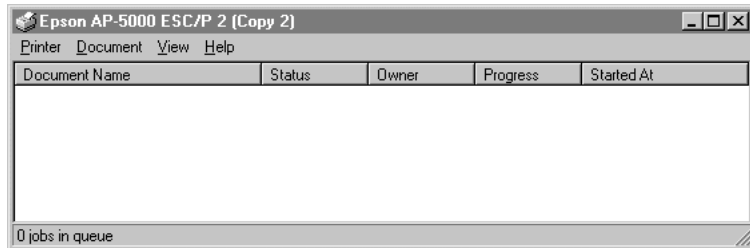
When the Printer Wizard is complete, the printer window displays for the printer you selected. The name of the printer is in the title bar of the window. You can now use the printer the same way you use any other printer.

Viewing/Changing AppleTalk Printer Functions

Once your AppleTalk printer is set up, PC MACLAN provides a utility that allows you to do the following printer functions:

- View general printer properties
- Display resident fonts
- Download fonts
- Download PostScript files
- View printer page settings

To display the AppleTalk Printer Functions window

1. **Open the Control Panel and double-click the Printers icon.**

    The Printers window displays.

2**.** **Click the icon for your AppleTalk printer with the right mouse button.**

    A shortcut menu displays.

3. **Click the AppleTalk Printer Utilities... option.**

    The AppleTalk Printer Functions dialog box displays.

4. **Click the tab that represents the printer function you want to view or change.**

    The dialog box for the selected function displays.

Creating/Viewing a Printer Log File

PC MACLAN also provides the ability to keep a log file for the connected printer. You can track one or all of the following:

- Standard events and errors
- General messages from the printer
- Error messages from the printer

You can view and clear the contents of the log at any time.

To create a printer log file

1. **In the Printer window for the selected printer, open the Printer pull-down menu and click Properties.**

2. **Click the AppleTalk tab.**
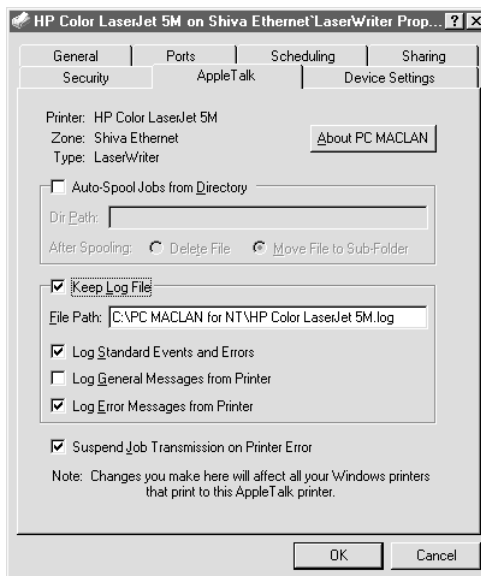
3. **Click the Keep Log File box.**

   A check mark appears in the box and all the possible options are activated.

4. **In the File Path field, leave the default destination file or type a new file path.**

5. **Click the check boxes next to the options you want to include in your log file.**

   A check mark appears in the box of the selected option. If you do not want an option, make sure the check box is blank.

6. **Click OK.**

   The log file is created and the Properties dialog box closes.

To view and clear the printer log file

1. **Open the Control Panel and select the Printers icon.**

   The Printers window displays all printers available on the system as well as the Add Printer icon.

2. **Click the AppleTalk printer once with the right mouse button.**

   A shortcut menu displays.

3. **To view the contents of the printer log, click the View Printer Log option.**

4. **To clear the contents of the printer log, click the Clear Printer Log option.**

# Auto-Spooling Print Jobs from a Directory

This feature allows you to establish a directory from which printable files can be spooled to an AppleTalk printer. The files copied to this directory must be properly formatted print jobs. If the target printer is a LaserWriter, the files must be PostScript files.

To automatically spool print jobs from a directory

1. **In the Printer window for the selected printer, open the Printer pull-down menu and click Properties.**

   The Properties dialog box displays. (There are several ways to access the Properties dialog box. Refer to your Windows NT documentation.)

2. **Click the AppleTalk tab.**
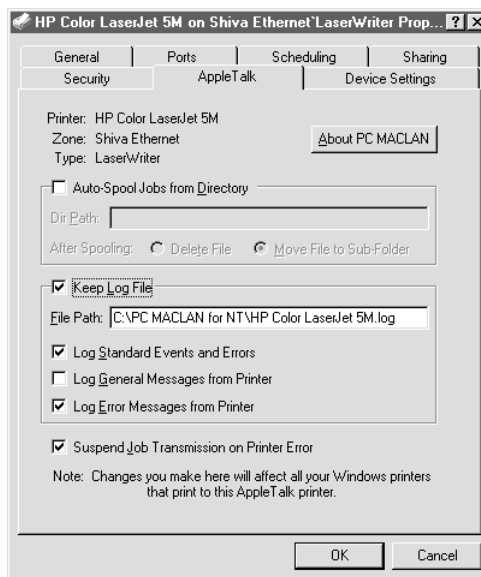
3. **Click the Auto-Spool Jobs from Directory box.**

   A check mark appears in the box and all possible options are activated.

4. **In the Dir Path field, type the complete path to an existing directory.**

This directory should not contain any files. You can specify a file name extension at the end of the directory path to allow only files with that extension to be spooled to the printer. For example, specifying *c:\spooldir*.ps* will only send files with a .ps extension to the printer. Don't forget the "*" wild card character.

5.   **Click <u>one</u> of the two "After spooling" options**.

This tells the system what to do with the file after the printing is complete.

6.   **Click OK**.

The auto-spooling to a directory is established and the dialog box closes.

Changing Your Password

PC MACLAN uses your Windows NT user name as the default user name when you log onto an AppleTalk file server. All you have to do is enter your password. You can change your password at any time using the Change Password option on the Windows shortcut menu. (To set a user name and password on the Macintosh, see Chapter 9.)

To change your password

1.   **Double-click the Network Neighborhood icon on your desktop.**

The AppleTalk file server to which you are logged on should appear in the Network Neighborhood listing along with the Entire Network icon, and any computers in your workgroup.

Or

If you are not logged on, double-click the Entire Network icon, then the Miramar AppleTalk Network icon to find the AppleTalk server.

All computers on the network will display. If AppleTalk zones are available on your network, they appear. When you click a zone, the file servers and printers that are available display in the zone window. If your network does not use zones, only the File Servers and printer display in the window.

2. **Click the shared AppleTalk file server icon once with the right mouse button.**

   A shortcut menu displays.

3. **Click the Change Password option.**

The following dialog box displays.
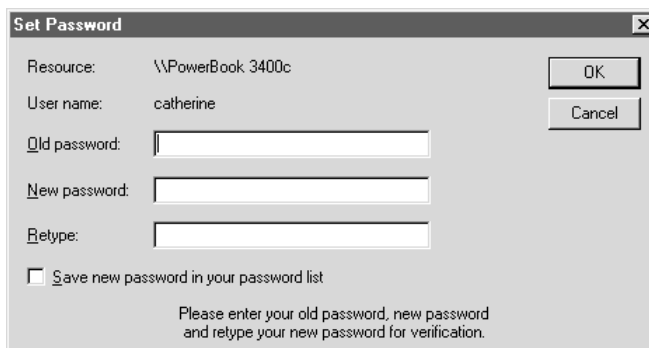
4. **Enter your existing password and your new password in the appropriate fields.**

   Remember, your password must be typed _exactly_ as it was the first time you entered it. Passwords are case sensitive, e.g., rosebud is NOT the same as ROSEBUD.

5. **Click OK.**

   The new password is accepted by the system. If you log off and then log on again, you must use the new password.

Changing Your Zone

You can also change the zone in which your AppleTalk file server and any shared printers display in the Network Neighborhood. The change will take effect immediately. You do not have to restart your system unless you are changing a network adapter card.

To change the AppleTalk zone

1. **Click the Network Neighborhood icon with the right mouse button.**

   A shortcut menu displays.

2. **Click the Properties option.**

3. **Select the** *Miramar Systems AppleTalk Protocol* **included in the network components list. (Look for the protocol icon.)**
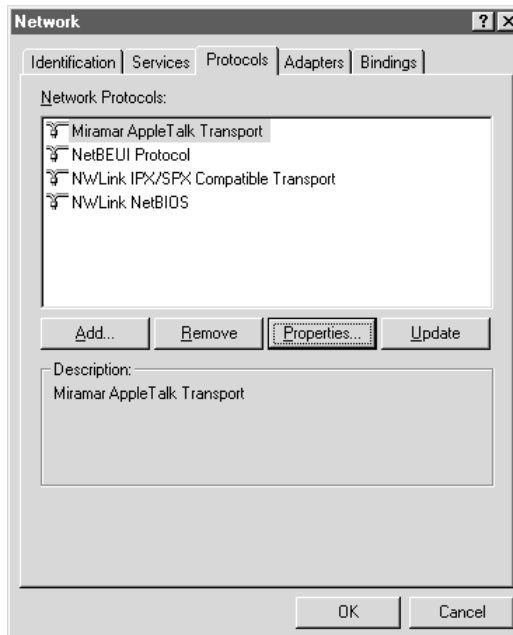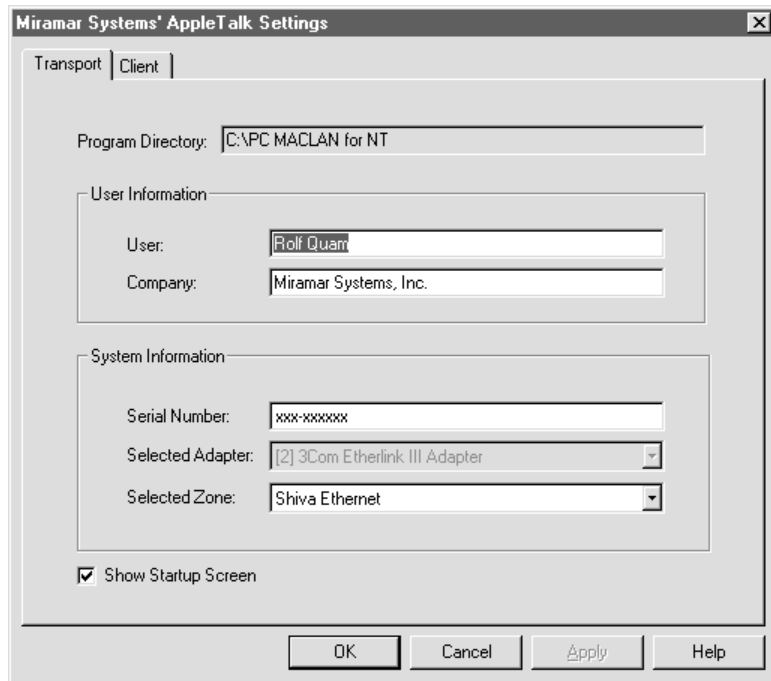

The selection is highlighted and the Properties button is activated.

4. **Click the Properties button.**

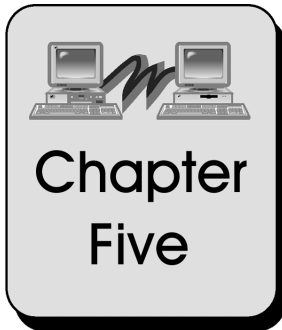The Miramar Systems' AppleTalk settings window displays.

5. **Click the Transport tab.**

The zone selected during installation is displayed in the Zones field.

6. **Click the arrow in the Zones field to display a list of available zones. Then select the new zone.**

7. **Click OK.**

Your system will now be located in the newly selected zone.

Chapter Five

Setting Up PC MACLAN File Server

This chapter explains how to set up the PC MACLAN File Server once you have completed installation and set up PC MACLAN Client.

Topics include:

        PC MACLAN File Server Console

        Setting File Server Security Parameters

        Defining Users and Groups

        Defining Shared Directories and Access Privileges

        Defining a File Extension Map

        Starting the File Server Automatically

PC MACLAN File Server Console

The PC MACLAN File Server allows you to share files between a PC computer and a Macintosh via a designated directory, hard drive, floppy drive or other attached media. Before you can use the PC MACLAN File Server, you will need to:

- Set the File Server Security Parameters
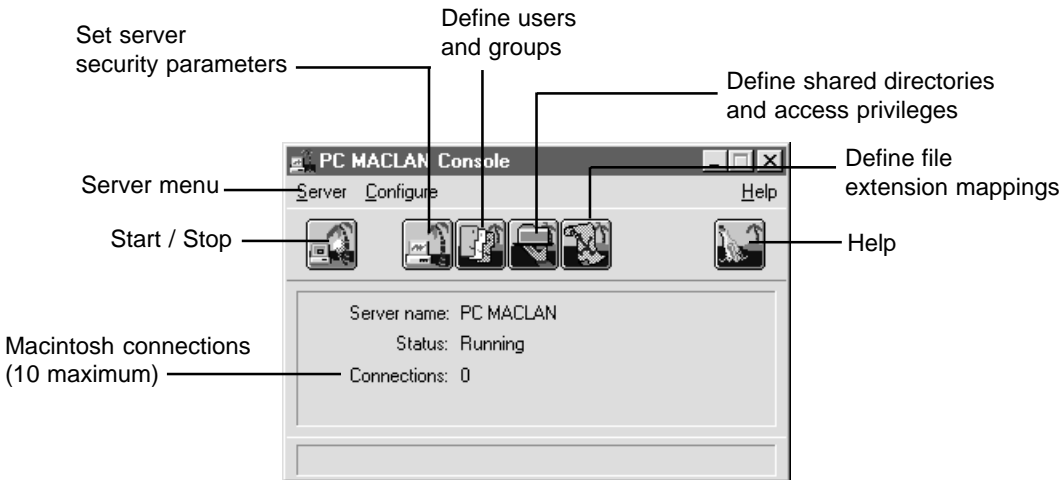- Define the Users and Groups
- Define the Shared Directories and Files
- Set Up Definable File Extensions

The PC MACLAN Console window is used to complete each of these tasks.

To display the PC MACLAN Console

1. **From the Start menu point to Programs/PC MACLAN.**

2. **Select File Server to display the PC MACLAN Console.**

This is the main window for the file services.

Setting File Server Security Parameters

The PC MACLAN Console provides a way for you to change the default server name (PC MACLAN) and set security parameters for the file server. If you make changes when the server is running, the changes will be reflected the next time the server is started.

To set the server security parameters

1. **On the PC MACLAN Console, click the Server Information icon.**

   The Server Information panel displays.
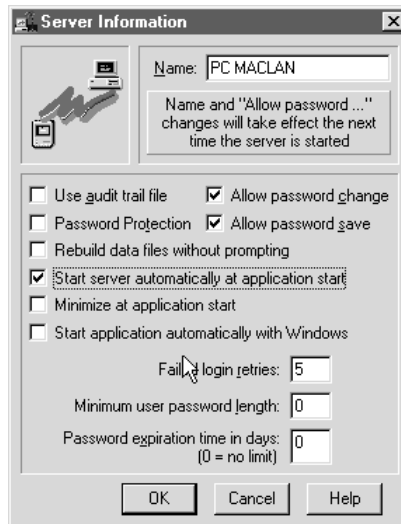
2. **Click the HELP button for a detailed explanation of each option in the Server Information panel.**

3. **Enter the configuration parameters you desire. Then click OK.**

   All parameters go into effect immediately except for the "name change" and "allow password change" parameters. These two changes go into effect when the server is restarted.

Defining Users and Groups

Users are the people who are allowed to use the PC MACLAN file server. A person may be assigned as an individual user and also as part of a group. A **group** is a logical organization of users according to an activity or resource. For example, a group may include all users from a specific department or all users who require access to a specific volume.
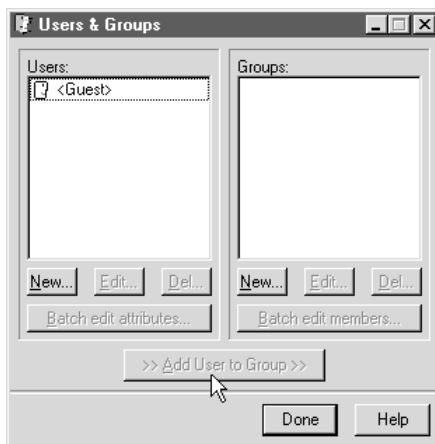
Users and groups are added, deleted or changed using the Users & Groups panel shown below.

To display the Users & Groups panel

1. **On the PC MACLAN Console, click the Users and Groups icon.**

   The Users & Groups panel displays.

   Click the Help button for a detailed explanation of each option in the Users & Groups panel.

Defining Users

The individuals using the PC MACLAN Server are defined, along with their attributes, before they can access the server from their Macintosh. A **Guest User** does not require a unique name or password and typically does not have complete access rights to a volume.

A **Registered User** has a unique name and password and may be assigned access rights to any shared folder or file.

The procedures for defining users are listed below.

To add a new user

1. **On the PC MACLAN Console, click the Users and Groups icon.**

   The Users & Groups panel displays. You may add a registered user. Anyone can log on as a guest if guest logins are allowed.

2. **Click New on the User side of the panel.**

   The User panel displays with New User entered in the Name field.

3. **Type the new user's name in the Name field.**

This name displays in the User's column in the Users & Groups panel. This same user name should be entered on the Macintosh client when accessing this server. (See Chapter 9.)

4. **To set a password for the new registered user:**

   - Click Set Password.
   - In the Set Password panel, type the password in both the New Password and Retype fields.
   - Click OK

New passwords must be entered twice with an exact match before a password is changed. If the two attempts do not match, an error message is displayed and you are prompted to reenter the new password. The maximum length of a password is 8 characters. Passwords are case-sensitive, e.g. rosebud is not the same as ROSEBUD.

5. **In the Attributes section, click on the boxes that define the specific access privileges for the user.**

Click HELP to see an explanation of each field in the Attributes section.

6. **To add a user to a group:**

   - Click Add to display a list of existing groups.
   - Click the desired group name.
   - Click OK to add the Group name in the box.

7. **To remove the user from a group.**

   - Click the group name listed in the box.
   - Click Remove to delete the group name from the list.

To edit one user's attributes

1. **On the PC MACLAN Console, click the Users and Groups icon.**

The Users & Groups panel displays.

2. **In the Users column, click the name of the User whose attributes you want to change.**

The New, Edit and Del buttons are activated.

3. **Click Edit on the User side of the panel.**

The User panel displays the user's name and attributes.

4. **Make the appropriate changes and click OK.**

The new user attributes are saved.

To edit several users' attributes at the same time

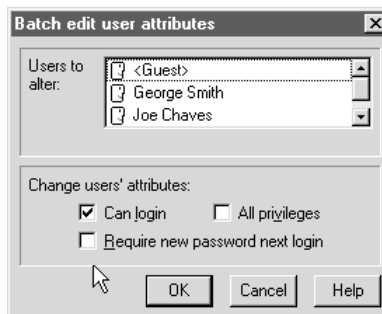1. **On the PC MACLAN Console, click the Users and Groups icon.**

The Users & Groups panel displays.

2. **In the Users column, hold down the shift key and click each user name you want to edit.**

The New, Edit, Del and Batch Edit User Attributes... buttons are activated.

3. **Click Batch Edit User Attributes.**

The Batch Edit User Attributes panel displays with all of the selected users listed in the Users to Alter list.

4. **Make the appropriate changes and click OK.**

The new user attributes are saved for each of the selected users.

To delete an existing user

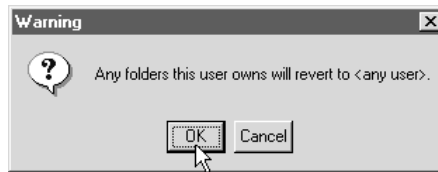1. **On the PC MACLAN Console, click the Users and Groups icon.**

   The Users & Groups panel displays.

2. **In the Users column, click the name of the user you want to delete.**

   The New, Edit and Del buttons are activated.

3. **Click Del on the User side of the panel.**

   The delete warning box displays.

4. **Click OK.**

   The user is deleted from the server.

To disable guest access

1. **On the PC MACLAN Console, click the Users and Groups icon.**

   The Users & Groups panel displays.

2. **In the Users column, click <Guest>.**

   The New, Edit and Del buttons are activated.

3. **Click Edit on the User side of the panel.**

   The User panel displays the Guest access privilege which is usually Can Login only.

4. **Deselect the Can Login option.**

No one can login as a Guest until you reselect the Can Login option.

Defining Groups

Users may at times be organized into logical groups. For example, a group may include all users from a specific department or all users who require access to a specific volume. The procedures for defining groups are listed below.
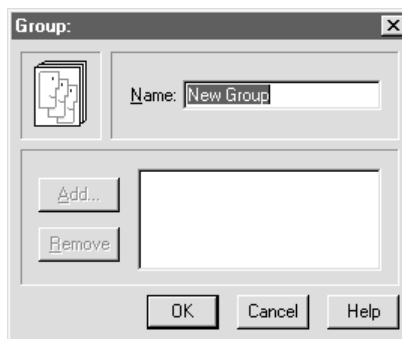
To add a new group

1. **On the PC MACLAN Console, click the Users and Groups icon.**

The Users & Groups panel displays.

2. **Click New on the Group side of the panel.**

The Group panel displays with New Group entered in the panel title and the Name field.

3. **Type the name of the group in the Name field.**

This name will display in the Group column of the Users & Groups panel.

4. **Click Add.**

The Add Members to New Group window displays.

5. **Click each name you want to add to the group. Then click OK.**

   The user names are added to the list.

6. **Click OK.**

   The group is defined and the members are added to the list.

To add existing users to a defined group

1. **On the PC MACLAN Console, click the Users and Groups icon.**

   The Users & Groups panel displays.

2. **In the Group column, click the name of the group you want to add users to.**

3. **In the Users column, click the names of the users you want to add to the selected group.**

   The >>Add Users to Group>> option is activated.

4. **Click >>Add Users to Group>>.**

   An Operation Completed message displays.

5. **Click OK.**

To edit a group

1. **On the PC MACLAN Console, click the Users and Groups icon.**

   The Users & Groups panel displays.

2. **In the Groups column, click the name of the Group you want to change.**

   The New, Edit and Del buttons are activated.

3. **Click Edit.**

   The Group panel displays the group name and members.

4. **To add a new user:**

   - Click the Add button.
   - Click the name of the user you want to add.
   - Click OK

5. **To remove a group member:**

   - Click the name of the user you want to remove.
   - Click Remove

6. **Click OK.**

   The group changes are saved.

To batch edit group member's attributes

1. **On the PC MACLAN Console, click the Users and Groups icon.**
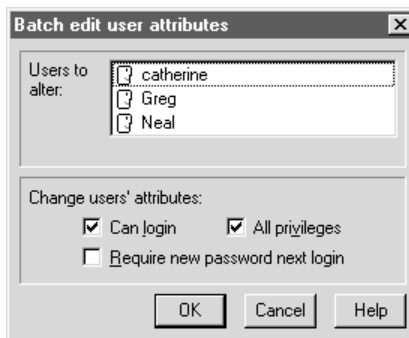
   The Users & Groups panel displays.

2. **In the Group column, click each group you want to edit.**

   The Batch Edit Members button is activated.

3. **Click Batch Edit Members.**

   The Batch Edit User Attributes panel displays with all of the selected users listed in the Users to alter box.

4. **Make the appropriate changes and click OK.**

   The new user attributes are saved for each user.

To delete an existing group

1. **On the PC MACLAN Console, click the Users and Groups icon.**
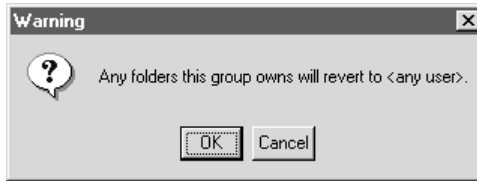
   The Users & Groups panel displays.

2. **In the Groups column, click the name of the group you want to delete.**

   The Del button is activated.

3. **Click Del.**

    The delete warning box displays.

4. **Click OK.**

    The group designation is deleted from the server.

Defining Shared Directories and Access Privileges

The next step in setting up the file server is to indicate which directory, hard drive, floppy drive or other attached media will be used to share files among the defined users and groups. When you select and name a directory (folder) on the file server, you define the name that will appear on the Macintosh desktop of connected users. A user can connect and log in only if they have access privileges to that folder. For more information on using shared directories, see Chapters 8 and 9. For more details on access privileges, see Chapter 2.
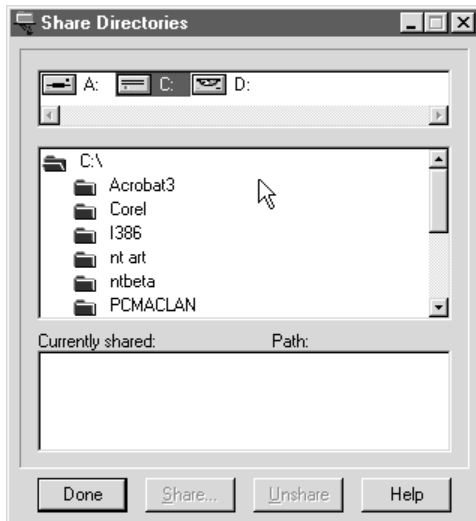
Shared directories are defined using the Shared Directories panel shown below.

To display the Shared Directories panel

1. **On the PC MACLAN Console, click the Share Directories icon.**

    The Share Directories panel displays.

Create a Shared Directory/Assign Access Privileges

When you create a shared directory you must identify the physical device, the directory name, and the access privileges of those users who will be sharing the directory.

There are two ways to create a shared directory and set up access privileges. You can:

• Use the PC MACLAN Console window
• Select the folder in Windows Explorer

The procedures are the same once the Shared Directory panel displays.

To create a shared directory and assign access privileges

1.   **Use the PC MACLAN Console window as follows:**

• Click the Share Directories icon to display the
  Share Directories panel.

• In the drives selection box, click the drive that contains
  the directory you want to share. All of the available directories
  in the selected drive display.

• Click the directory you want to share, or select the entire drive by clicking the root directory.

• Click the Share button. The Shared Directory panel displays.

Or

Display the directory icon in Windows Explorer, click the icon once with the right mouse button and select AppleTalk Sharing from the shortcut menu.

In either case, the Shared Directory window displays.

2. **In the Seen As field, type the directory name you want to display on the users desktop.**

If the name is different than the existing directory name, the new name appears in parentheses next to the current one on the NT system.

3. **Click Read Only if you do not want a user to be able to save anything to the selected directory.**

4. **In the Privileges box, select the Owner, Group and Everyone privileges you want for the directory.**

For a detailed explanation of access privileges, click the Help icon and then click *Understanding Access Privileges* in the Privileges section.

5. **To apply the same access privileges to all folders contained within the selected folder, click Make all Currently Enclosed Folders Like This One.**

6. **When all privileges are selected, click OK.**

    The selected directory name is placed in the Currently Shared list in the Shared Directories panel in two forms: (1) The way the directory name will appear in the Macintosh Chooser and on the Macintosh desktop, (2) The way the directory name appears on the PC.

    If you accessed the Shared Directory panel from the PC MACLAN Console, the Share Directories panel will display now.
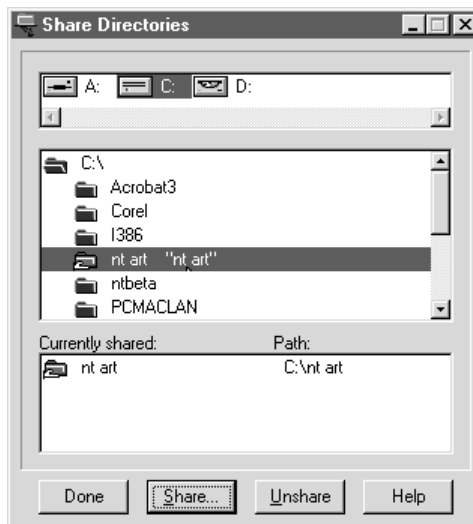
7. **Repeat steps 2 through 6 for each directory you want to share.**

8. **When finished, click Done.**

    All shared directories will display in the Currently Shared list on the Shared Directories panel.

Change Access Privileges

You may also change the access privileges assigned for a shared volume using the Shared Directory panel.

To change access privileges for a shared directory

1. **On the PC MACLAN Console, click the Share Directories icon. When the Share Directories panel displays, click the directory name in the Currently Shared list that you want to edit. Then click Share.**

   Or

   Display the Directory icon in Windows Explorer, click once with the right mouse button and select AppleTalk Sharing from the shortcut menu.

   In both cases, the Shared Directory panel displays the current privileges.

4. **Make the required changes and click OK.**

   For a detailed explanation of access privileges, click the Help icon and then click *Understanding Access Privileges* in the Privileges section.

Unshare a Directory

When you no longer have a reason to share a directory, you can unshare the directory. You cannot unshare a directory if a user is currently accessing the volume.

To unshare a directory

1. **On the PC MACLAN Console, click the Share Directories icon.**

   The Share Directories panel displays.

2. **In the Currently Shared box, click the name of the directory you want to unshare.**

   The Unshare button is activated.

3. **Click Unshare.**

   All of the Macintosh file and folder information for the volume remains intact.

4. **Click OK to accept your selection.**

Defining a File Extension Map

When a document is created on the NT system, the operating system identifies the file creator or application with a **file name extension**. For example, a Microsoft Word document has the file extension *.doc*. If you double-click the file name, the document will open along with the application. The server supports file extensions up to fifteen characters.

The Macintosh operating system provides this capability by storing specific information with every file. This includes a 4-character code called a **file creator** that uniquely identifies the application that originated the file and another 4-character code called a **file type** that identifies the type of file. For example, a Microsoft Word document has a file creator code of *MSWD* and a file type code of *W6BN*.

File extension mapping provides a way to tell the PC MACLAN File Server how to treat Windows files with various file name extensions so they will display properly on the Macintosh desktop. In other words, you can define which Macintosh file creator code and file type code should be used with (mapped to) a specific PC file extension.

A few common file types come pre-configured with PC MACLAN. These are displayed in the File Extension Mapping window. However, there may be times when you have to add, edit, delete or duplicate a file extension. This can be done using the File Extension Mapping window.

Windows files that do not have an extension mapping assigned are displayed on the Macintosh desktop using a generic PC icon. If you assign an extension mapping to a file displayed using the generic PC icon, the generic icon is automatically updated to the newly assigned icon when the folder is reopened by the Macintosh user. However, if you change the extension mapping for a file that already has an extension mapping, the new icon is not applied until the existing file is renamed or moved to a new location in the shared directory.
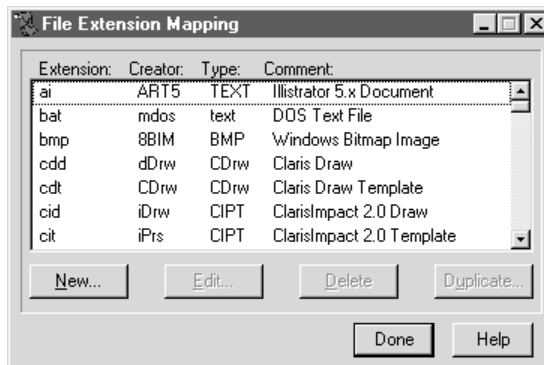
PC MACLAN Client uses these file extension mappings when files are copied to an AFP server.

To display the File Extension Mapping panel

1. **On the PC MACLAN Console, click the File Extension Mapping icon.**

   The File Extension Mapping panel displays a list of the current file extension settings with the New button activated.

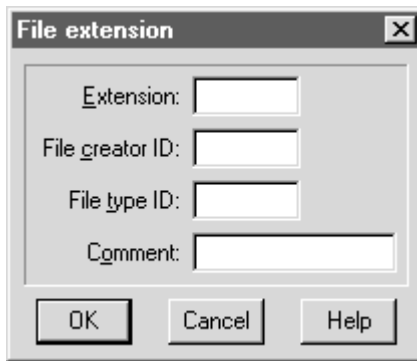| Extension:	Creator:	Type:	Comment:
ai	ART5	TEXT	Illistrator 5.x Document
bat	mdos	text	DOS Text File
bmp	8BIM	BMP	Windows Bitmap Image
cdd	dDrw	CDrw	Claris Draw
cdt	CDrw	CDrw	Claris Draw Template
cid	iDrw	CIPT	ClarisImpact 2.0 Draw
cit	iPrs	CIPT	ClarisImpact 2.0 Template

To add a new file extension

1. **On the PC MACLAN Console, click the File Extension Mapping icon.**

   The File Extension Mapping window displays.

2. **Click New.**

   The File Extension panel displays.

3. **Type the file name extension, the file creator ID, and the file type ID in the appropriate fields.**

   Click Help for more detail about each field. The file creator and file type IDs are case sensitive. The file name extension can have up to 8 characters.

4. **In the Comment field, type a description that explains the extension you just added or updated.**

5. **Click OK.**

   The File Extension Map is added to the list.

To edit a file extension map

1. **On the PC MACLAN Console, click the File Extension Mapping icon.**

   The File Extension Mapping window displays.

2. **Click the file extension map you want to change.**

   The Edit button is activated.

3. **Click Edit.**

   The File Extension window displays the existing data for the selected map.

4. **Make the appropriate changes in each of the fields.**

   If the file creator and file type are changed, the changes will not be reflected on files that have already been displayed on the Macintosh. Changing the Extension field has the same effect as deleting the current value and creating a new one.

5. **Click OK.**

   The File Extension Map changes are saved.

To delete a file extension map

1. **On the PC MACLAN Console, click the File Extension Mapping icon.**

   The File Extension Mapping window displays.

2. **Click the file extension map you want to delete.**

   The Delete button is activated.

3. **Click Delete.**

4. **Click OK.**

   The File Extension Map is deleted.

To duplicate a file extension map

You can quickly add a file extension map that is similar to an existing one by copying the existing map and then making changes.

1. **On the PC MACLAN Console, click the File Extension Mapping icon.**

   The File Extension Mapping panel displays.

2. **Click the file extension map you want to duplicate.**

   The Duplicate button is activated.

3. **Click Duplicate.**

   The File Extension window displays with all fields except the Extension field complete. This data is taken from the selected file extension map.

4. **Type the file name extension in the Extension field and modify any of the other fields, if necessary.**

5. **Click OK.**

   The new file extension map is added.

The PC MACLAN File Server is now set up and ready to be used. Before you can use the File Server, your Macintosh must be set up for file sharing and you must be logged in (See Chapter 9.) For details on how to start the file server and use the features, see Chapter 8.
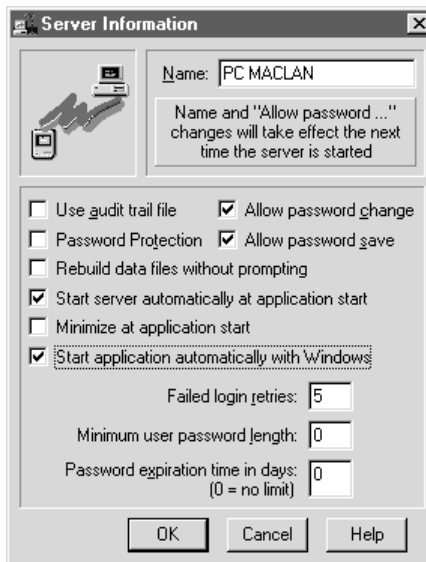
Starting the File Server Automatically

The PC MACLAN file server can be set to start automatically when Windows loads. The file server can also be set to run minimized. However, if password protection is enabled, only an "Admin" user can set the minimized file server to an editable configuration.

## To have the file server start automatically

1. **On the PC MACLAN Console, click the Server icon.**

    The Server Information panel displays.

2. **Select Start server automatically at application start, Start application automatically with Windows, and Minimize at application start (if desired).**

3. **Click OK.**

    From this point forward, the server will start automatically when Windows NT loads.

Chapter Six
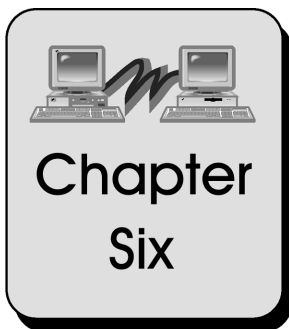
Setting Up PC MACLAN Print Server

This chapter explains how to set up the PC MACLAN Print Server once you have completed the appropriate installation procedures.

Topics include:

Print Services and Spoolers

Creating a New Print Spooler

Starting and Stopping a Print Spooler

Editing a Print Spooler

Removing a Print Spooler

Exiting the Print Server

Using Print Services

Print Services and Spoolers

The PC MACLAN print server allows you to share local printers (printers connected to the NT system via a parallel port cable) with other users on your network by registering selected printers onto the AppleTalk network as a LaserWriter or other device type, as specified. The print server accepts print jobs from AppleTalk systems using the Printer Access Protocol (PAP) and responds to any queries requested by the system, passing the print jobs onto the Windows printer queue.

The Macintosh user who wants to access a printer connected to an NT system using the PC MACLAN Print Server can do so by selecting the printer in the Macintosh Chooser dialog box.

PC MACLAN may print to any Windows printer. The standard printer for a Macintosh is PostScript. Therefore, to use a printer other than a PostScript printer you will need SuperPrint from Zenographics on the NT system to connect PostScript to the desired printer language.
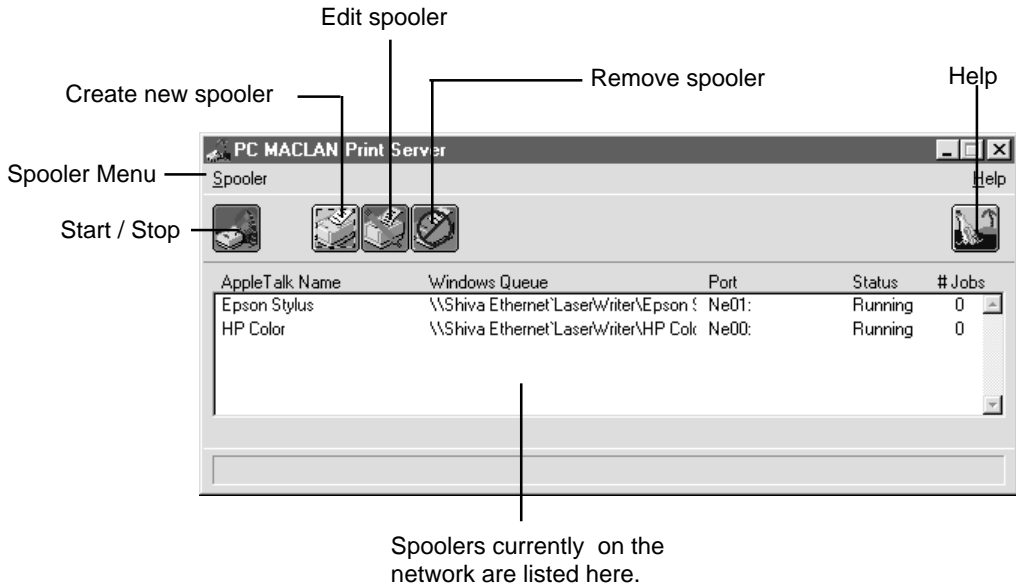
The print queue spooler will accept jobs simultaneously from multiple Macintoshes. You can setup a unique spooler for each printer. Each spooler is operated independently and may be started or stopped individually.

The PC MACLAN Print Server window is used to set up the print spoolers.

To display the PC MACLAN Print Server

1. **From the Start menu, point to Programs/PC MACLAN.**

2. **Select Print Server to open the PC MACLAN Print Server window.**

   The PC MACLAN Print Server window displays with the Create Spooler icon active. This is the main window for the print services. When you open the PC MACLAN print server, any existing print spoolers that were running when the application was last shutdown are automatically started. Any print spoolers that were stopped will remain stopped.

Edit spooler

Remove spooler

Help

Create new spooler

Spooler Menu

Start / Stop

Spoolers currently on the
network are listed here.

Creating a New Print Spooler

Creating a spooler allows those on the network to access an additional printer.
You can spool your documents to a printer locally connected on the network, or you
can spool documents to a directory on the Windows NT system.

There are two ways to create a new print spooler. You can:

• Use the PC MACLAN Print Server Window
• Select the printer in the Printers folder

The procedures are the same once the Spooler Configuration dialog box displays.

To create a print spooler

1. **On the PC MACLAN Print Server window, click the Create New Spooler icon.**

   Or

   In the Printers folder, click once on the printer icon with the right mouse button and select AppleTalk Sharing from the shortcut menu.

   In both cases, the Spooler Configuration dialog box displays

AppleTalk setup parameters

Destination parameters
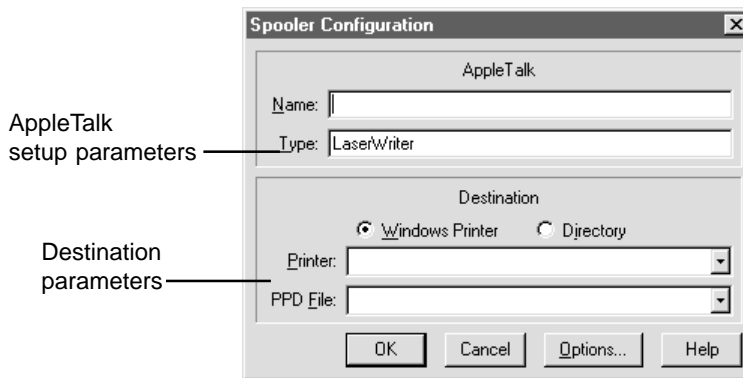
If you select **Windows Printer** as your destination, you can designate a Windows printer to print any incoming job. If you select **Directory** as your destination, you can have the jobs saved to a designated directory to be printed later by you or a RIP program.

2. **In the Name field, type the name of the printer or spooler.**

   The name you type here will appear in the Macintosh Chooser dialog box.

3. **In the Type field, enter the type of printer you have**.

   The default device type is LaserWriter. This will support most PostScript printers. However, you can use any other Printer Access Protocol (PAP) device. (For example, an HP DeskJet 500 can be shared as a "DeskWriter" type.)

4. **To select a Windows printer to print incoming jobs:**

    - Click the Windows Printer radio button.
    - Click the arrow to open the printer list.
   - Select one of the printers on the list

    If the printer is not displayed, it is not installed on your system. Refer to your Windows NT documentation to install the printer driver.

5. **To save print jobs to a specific directory:**

    - Click the Directory radio button.
    - Type the directory path in the Directory field.

6. **Click the arrow to open the PPD File options list and select the PPD file that contains the specific PostScript functionality (including fonts) your printer supports.**

    Check your printer's user manual if you are unsure what PPD file to select. PC MACLAN comes with a number of standard Apple LaserWriter PPDs. If your printer is a PostScript printer there is probably a specific PPD file that may be found on the Windows driver installation disk that came with your printer.

7. **If your print jobs contain binary data (graphics), click the Options window and select an option to avoid print job failure due to embedded control characters.**
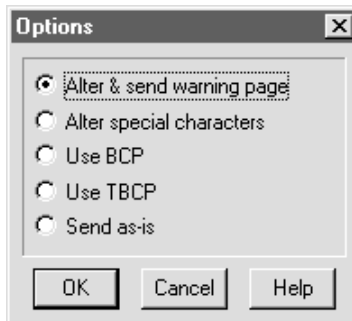
Click Help for detailed information about each available option. Select an option only if it is supported by your printer (see your printer manual.) Click OK or Cancel to return to the Spooler Configuration window.

8. **Click OK on the Spooler Configuration dialog box.**

The print spooler is added to the list on the PC MACLAN Print Server window with the status "running".
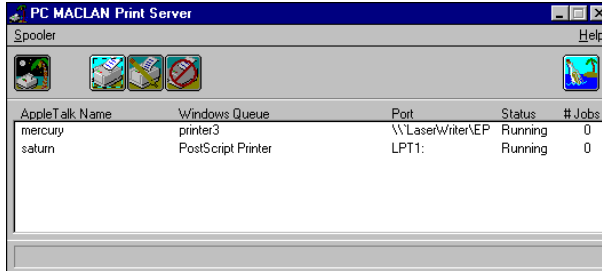
The printer may now be used the same way as any other printer attached to your NT system.

Starting and Stopping a Print Spooler

The print spoolers displayed on the PC MACLAN Print Server window may be started and stopped individually. As long as the status of the print spooler reads "running," the printer may be used by anyone on the network.

When you open the PC MACLAN print server, any existing print spoolers that were running when the application was last shutdown are automatically started. Any print spoolers that were stopped will remain stopped. In addition, each time you create a new print spooler, it is automatically started when created.

To start a print spooler

1. **On the PC MACLAN Print Server window, click the name of the print spooler you want to start.**

   The name is highlighted.

2. **Click the Start/Stop icon, or open the Spooler pull-down menu and click the Start Spooler option.**

   The status of the selected print spooler changes to "running" and the Start/ Stop icon is lit. The printer may now be used by anyone connected to the AppleTalk network.

To stop a print spooler

1. **On the PC MACLAN Print Server window, click the name of the print spooler you want to stop.**

   The name is highlighted.

2. **Click the Start/Stop icon, or open the Spooler pull-down menu and click the Stop Spooler option.**

   The status of the selected print spooler changes to "stopped" and the Start/ Stop icon turns dark. The printer is no longer available to users connected to the network.

Editing a Print Spooler

Once a print spooler has been created, you can make changes to the existing information using the PC MACLAN Print Server window. You cannot change a spooler when it is running. The spooler must be stopped first.

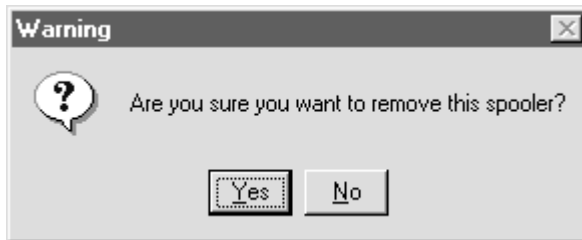## To edit a print spooler from the PC MACLAN Print Server window

1. **On the PC MACLAN Print Server window, click the print spooler you want to edit.**

   The spooler name is highlighted.

2. **If applicable, click the Start/Stop icon to stop the spooler.**

   The spooler status must be "stopped" before you can make a change.

3. **Click the Edit Spooler icon on the PC MACLAN Print Server window.**

   The Spooler Configuration dialog box displays the existing information for the selected print spooler.

4. **Make the appropriate changes and click OK.**

   The changes are saved but the status remains as "stopped".

5. **Click the start/stop icon to start the spooler.**

   The start/stop icon is lit and the spooler status changes to "running".

Removing a Print Spooler

The PC MACLAN Print Server window allows you to remove an existing print spooler. The print spooler status must be "stopped" before you can remove it.

To remove a print spooler

1. **On the PC MACLAN Print Server window, click the print spooler you want to remove.**

   The spooler name is highlighted

2. **If applicable, click the Start/Stop icon to stop the spooler.**

3. **Click the Remove Spooler icon on the PC MACLAN Print Server window.**

   A message displays giving you a chance to change your mind.

4. **Click Yes to delete the spooler.**

   The spooler is deleted from the PC MACLAN Print Server list.

Exiting the Print Server

When you exit the print server, the print spoolers that are running at the time will automatically start running when you open the PC MACLAN Print Server the next time. Exiting will stop all AppleTalk spooling services. Therefore, it is wise to make sure that no one is in the process of using one of the print spoolers before you exit.

To exit the print server

1. **On the PC MACLAN Print Server window, click the Spooler menu in the menu bar.**

   The Spooler menu displays.

2. **Click the Exit option.**

   A warning message displays.

3. **Click OK.**

   All AppleTalk spooling services are stopped.

Using Print Services

Printers spooled on the network using PC MACLAN Print Server are used the same way as any other printer connected to the network. To use a PC MACLAN printer connection from the Macintosh, you must select the printer in the Chooser dialog box first. (See Chapter 9.)

Another Windows NT on the network running PC MACLAN Client can also print to a printer shared by a PC MACLAN spooler.
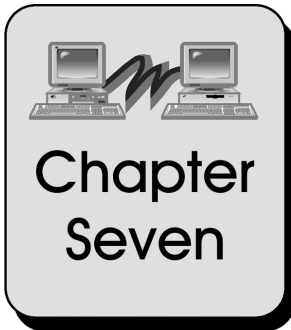
Using PC MACLAN Client

This chapter explains how to use PC MACLAN Client after you have logged on to the AppleTalk file server of your choice.

Topics include:

> Displaying Shared Files
>
> Copying Files
>
> Sharing Windows Applications
>
> Viewing File/Folder Properties and Privileges
>
> Defining a File Extension Map

Displaying Shared Files

Once you log on to an AppleTalk file server, you can display and access shared files using the Windows NT interface or the Windows NT Explorer.

If you mapped the shared volume to a drive, you can access the files by selecting the letter of the mapped drive as it appears under My Computer in Windows NT Explorer. If you did not map to a drive, you can access the files through the Network Neighborhood icon in Windows NT Explorer or through the Network Neighborhood icon on the desktop (see Chapter 4).

To display shared files using Windows NT Explorer

1. **On the Task Bar:**

   - Click Start
   - Point to Programs
   - Click Windows Explorer

   The Explorer window displays a list of all the files available on each drive connected to your NT system. For more details about the Explorer window, refer to the online Help for Windows NT.

Disk Drives and their folders are listed on the left side.

The contents of the drive or folder you selected are displayed on the right side.
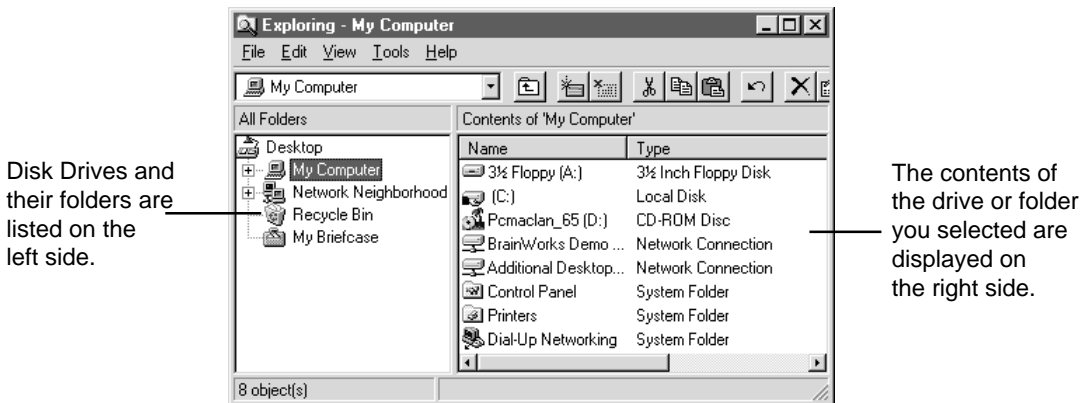
2. **If you mapped to a network drive, open My Computer and scroll through the disk drives and folders listed on the left side of the Explorer window until you come to the drive to which you mapped your AppleTalk file server. Then click the drive icon.**

    You may have to press <F5> to refresh the Explorer list.

3. **If you did not map to a network drive, scroll through the disk drives and folders listed on the left side of the Explorer window until you come to the Network Neighborhood icon.**

    Click the + sign next to the Network Neighborhood icon. If your AppleTalk file server does not display, click the + sign next to the Entire Network icon, then the Miramar AppleTalk Network icon.

    The files available on the disk drive are displayed on the right side of the Explorer window. For file naming conventions, see Chapter 2.

Copying Files

You can use Windows NT Explorer to copy files between your computer and another computer on the network. If you copy a file and then make changes to the file, the changes are not reflected in the original file.

To copy files using Windows NT Explorer

1. **On the Task Bar:**

    • Click Start
    • Point to Programs
    • Click Windows Explorer

    The Explorer window displays a list of all the files available on each drive connected to your NT system.

2. **Click the drive letter for the AppleTalk file server volume.**

   The files available on the volume display on the right side of the Explorer window.

3. **On the left side of the Explorer window, locate the folder to which you want to copy the file.**

   Do not click the folder. If you do, the contents of the folder will display on the right side and you will no longer have access to the contents of the AppleTalk file server volume.

   For example, if you mapped to drive F, look for drive F in the list. There may also be a name next to the drive letter if the drive is named on the AppleTalk file server.

4. **Drag the file you want to copy from the right side of the Explorer window to the destination folder on the left side of the Explorer window.**

   A copy of the file is placed in the destination folder. You now have complete access to the file.

   To copy a file from your NT system to the AppleTalk file server, just reverse the procedure. That is, display the contents of the folder on the right side of the Windows NT Explorer and drag the file you want to transfer to the destination Macintosh folder on the left side of the Windows NT Explorer window.

Sharing Windows Applications

You can share Windows applications with other users by storing them on an AppleTalk file server and then opening the application from the AppleTalk file server.

> **WARNING**
>
> Do not use the Windows Explorer (which uses DOS) to copy a Macintosh application to a different drive from the directory on which it currently resides, e.g., from E (the AppleTalk file server drive) to C (your PC hard disk drive). On computers running the Mac OS, Macintosh applications are stored in two files known as the *data fork* and the *resource fork*. If you move a Macintosh application on an AppleTalk file server to a different drive, only the data fork can be moved – the resource fork cannot be moved. Once the data fork is moved, the resource fork is deleted. The application **will not work** without its resource fork.

For more information about sharing network resources, refer to the online Help topic *Guidelines for Sharing Network Resources*.

To use a Windows application stored on an AppleTalk File Server

1. **Open the Windows Explorer or File Manager and display the AppleTalk file server drive contents.**

2. **Double-click the application name.**

   The application is automatically started on your computer just as if the application were located on the disk drive connected to your computer. The application may run slower.

3. **When you save files created by the application, use the Save As feature to save to any drive on the network to which you have access.**

   You do not have to save your files to the AppleTalk file server.

Viewing File/Folder Properties and Privileges

Windows NT has Property pages that allow you to see information about a file or folder. PC MACLAN extends this functionality to the AppleTalk network. You can use this feature to see the long name icon for a file as well as other properties. In addition, you can use this feature to see the access privileges for a selected folder or directory. For more information about access privileges, refer to Chapter 2.

To view file or folder properties in Windows NT

1. **Open the Windows NT Explorer and display the AppleTalk file server icon on the left side of the window.**

2. **Click the AppleTalk file server icon.**

   The contents of the selected volume displays on the right side of the Explorer window.

3. **In the contents list, click a file or folder name with the right mouse button.**

   A shortcut menu displays.

4. **Click the Properties menu option.**

5. **When the Properties dialog box displays, click the AppleTalk tab.**

If you selected a file, the following dialog box displays.

Properties for a file
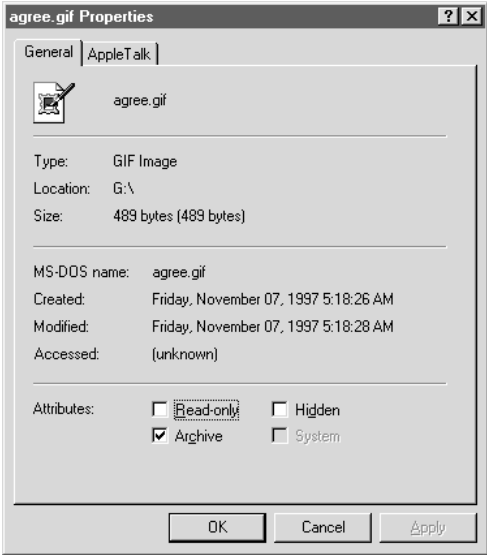
If you selected a folder, the following dialog box displays.

Properties for a folder
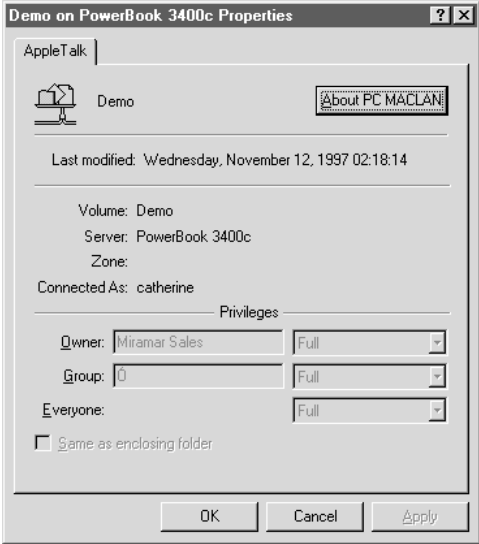
The privileges portion of the dialog box applies only to a folder or directory. The access privileges can be modified if you are the owner of the folder. Refer to the Windows NT online help for information about each field on the dialog box. For more information about access privileges, refer to Chapter 2.

Defining a File Extension Map

When a document is created on the NT system, the operating system identifies the file creator or application with a **file name extension**. For example, a Microsoft Word document has a file name extension of *.doc*. If you double-click the file name, the document will open along with the application

The Macintosh operating system provides this capability by storing specific information with every file. This includes a 4-character code called a **file creator** that uniquely identifies the application and another 4-character code called a **file type** that identifies the type of file. For example, a Microsoft Word document has a file creator code of MSWD and a file type code of W6BN.

If you create a file on your Macintosh and include the file extension, Windows will recognize the creator and display the file with the appropriate icon. For example, if you name a file *letter.doc*, Windows will recognize this as a Microsoft Word document. (You must have Microsoft Word on your NT system.)

If you create a file on your NT system, you can use the PC MACLAN file extension mapping feature to identify which Macintosh file creator and file types should be used with your Windows files. As a result, the windows file, when transferred to the Macintosh, will display the correct application icon and will open the application when you double-click on the icon. The Windows files that do not have extension mapping assigned are displayed on the Macintosh desktop using a generic PC icon.

To add or edit a file extension mapping

1. **Open the Properties dialog box for the selected file and click the AppleTalk tab. (See *Viewing File/Folder Properties and Privileges*.)**

    The Properties dialog box displays.
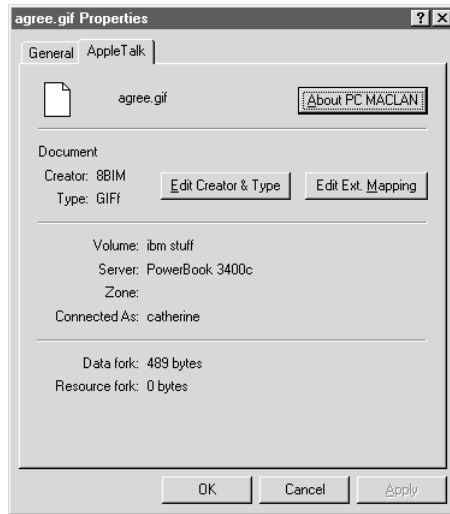
The existing creator type and file type are displayed, if known. In addition, there are two buttons that allow you to add or edit the Macintosh creator and type and then map the selected codes to a specific file name extension.

2. **To add or edit the Macintosh creator and type:**

- Click the **Edit Creator & Type** button The following dialog box displays:
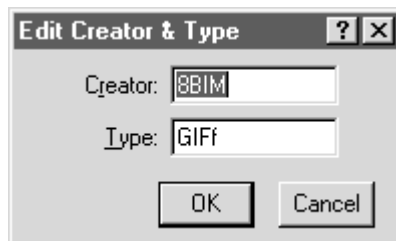
- In the **Creator** box, type in the file creator code.
- In the **Type** box, type the file type code.
- Click OK. The **Are You Sure?** message displays.
- If you want to make the change, click OK.
- If you do not want to make the change, click Cancel.

3. **To map the Macintosh codes to a Windows file name extension:**

- Click the **Edit Ext. Mapping** button. The following dialog box displays.
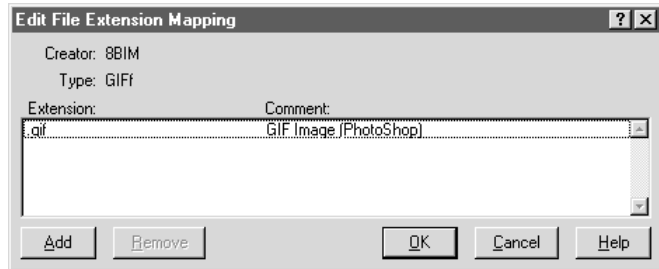
- Click the **Add** button. The following dialog box displays.
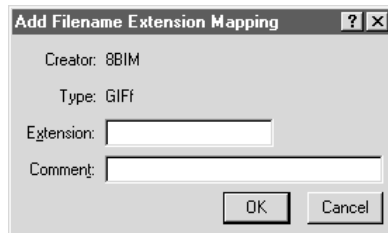
- In the **Extension** box, type the PC file extension you want to map.
- In the **Comment** box, type the name of the program represented by the file extension.
- Click OK. The PC file extension and comment display in the Edit File Extension Mapping dialog box.
- Click OK. The **Are You Sure?** message box displays.
- If you want to map the extension, click OK.
- If you do not want to map the extension, click Cancel.

Adding, modifying or removing a file extension mapping from this property page affects the file extension mapping for PC MACLAN File Server as well.
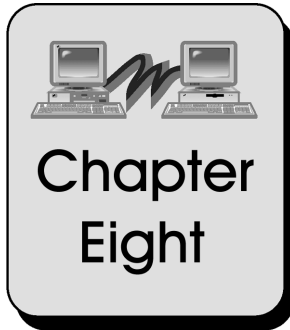
Using PC MACLAN File Server

This chapter explains how to use the PC MACLAN File Server after setup is complete, and how to display and access shared files.

Topics include:

> Start Server, Shutdown, and Cancel Shutdown
>
> Display and Use Shared Files
>
> Real-Time Folder Update
>
> Disable and Enable Logins
>
> Display Connections and Send Messages
>
> Back up and Restore System Files
>
> Purge Volume
>
> Exit the File Server

Start Server, Shutdown, and Cancel Shutdown

When you open the PC MACLAN Console window, the status field indicates that the server is not running. In order for users to access shared files, you must first start the server. This is done using the Start/Stop icon or the Server pull-down menu.

The first option on the Server pull-down menu is a three-in-one menu item used to start the server, shut down the server, and cancel the server shutdown process. When the server is not running, **Start Server** displays. When the server is running, **Shutdown Server** displays. When the server is in the process of "shutting down," the **Cancel Shutdown** option displays.

To start the PC MACLAN File Server

1. **From the Start menu, point to Programs/PC MACLAN and select File Server.**

   The PC MACLAN Console window displays with the Start/Stop icon dark.

2. **Click the Start/Stop icon or open the Server menu and select Start Server.**

   The **Status** field displays messages then changes to *Running*, the Start/Stop icon changes to the brighter *day time* icon, and the Server menu option changes to *Shutdown Server*. The number of users connected to the server displays in the **Connections** field. Ten is the maximum.

   When the status field changes to Running, the file server is ready for users to log on and share the designated directories.

To shut down the PC MACLAN File Server

1. **Click the Start/Stop icon, or open the Server menu bar and select Shutdown Server.**

   The Start Shutdown dialog box displays.

Start Shutdown

Number of minutes until shutdown:

10

OK   Cancel   Help
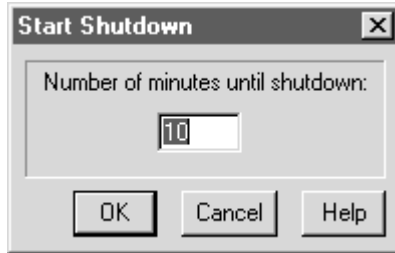
You may specify a time interval until the actual shutdown occurs (10 minutes is the default). The system notifies all users who are logged on that the server is shutting down in the designated time interval. If you enter zero, the server will shut down immediately. This is not a good idea if users are logged onto the server because they may have files open.

3. **Type a time interval, or leave 10 minutes, and click OK.**

The Start/Stop icon turns to a darker *night time* icon, and the PC MACLAN Console window displays the following message:

Shutting down in: XX mins

In addition, a message displays on the screen of each logged on user. When the shutdown process is complete, the Status field on the PC MACLAN Console window changes to *Not Running*.

To cancel the file server shutdown process

1. **Click the Start/Stop icon or open the Server menu and select Cancel Shutdown Server.**

The shutdown process is canceled immediately. A message about the cancellation displays on the screen of each logged on user. The Status field on the PC MACLAN Console remains as *Running* and the Start/Stop icon changes to the *day time* icon.

Display and Use Shared Files

Once you have set up the File Server (Chapter 5) and the Macintosh users have logged onto the server (Chapter 9), you may share files and transfer files across the network via the designated hard drive, CD-ROM, floppy drive or other removable media (A maximum of ten Macintoshes can be connected to the server at one time.)

For both the Macintosh and Windows NT environments, the folders and files appear as they usually would. Windows users may display and access the shared files using the Windows NT Explorer. Macintosh users may display and access shared files by opening the shared folder icon that appears on their desktop (See Chapter 9 for details.)

Real-Time Folder Update

When more than one user has access to a shared directory, the files may be updated by several different users. The Macintosh and Windows NT environments handle real-time folder update differently.

Macintosh Real-Time Updates

Every 20 seconds, the Macintosh finder automatically checks any volume that is open on the desktop and updates all open folders to reflect changes made by other Macintosh or Windows users. For example, if two Macintosh users have the same PC MACLAN shared folder open and one user deletes a file from the folder, the icon for the deleted file automatically disappears from the other Macintosh user's folder as well.

Windows Real-Time Updates

In the Windows environment, the update process is not automatic. Instead, the folder has to be closed and reopened, or the screen must be refreshed (F5) before the change is seen. For example, if a Macintosh user has a folder open from a shared volume and the user on the Macintosh deletes a file from that folder, the Windows user will not detect the missing file until the folder is closed and reopened.

Disable or Enable Logins

You have the ability to allow or not allow users to log onto the PC MACLAN server. This is accomplished using the pull-down Server menu on the PC MACLAN Console window. This is a two-in-one menu button. When logins are enabled, the menu item reads *Disable Logins*. When logins are disabled, the menu item reads *Enable Logins*.

To disable or enable logins

1. **From the Start menu, point to Programs/PC MACLAN and select File Server.**

2. **Click Server in the menu bar.**

   The Server pull-down menu displays.

3. **Click the Disable Logins option**.

   Users will not be able to log onto the server from this point in time. The menu item changes to Enable Logins.

4. **To allow users to log on again, click the Enable Logins option.**

   Users are now able to log onto the server again.

Display Connections and Send Messages

You can use the Display Connections feature to display a list of all the users currently logged onto the server. From this list, you can send messages to a selected user and display a list of the shared directories being used by a selected user.

To display connections and send messages

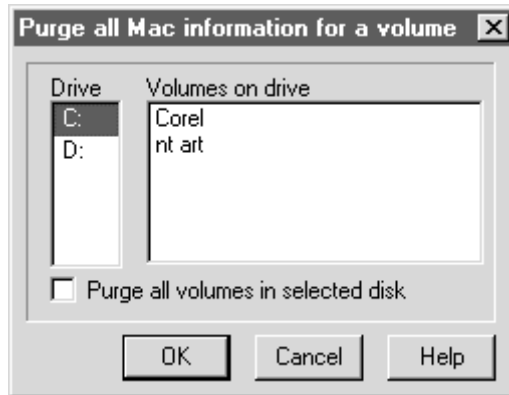1. **From the Start menu, point to Programs/PC MACLAN and select File Server.**

2. **Click Server in the menu bar.**

    The Server pull-down menu displays.

Shutdown Server
Disable logins
Connections
Backup system files
Purge volume
Exit

3. **Click the Connections option**.

    The Connections window displays a list of all users currently logged onto the server.

Connections

catherine

Message   Files

OK   Help

4. **To send a message to a specific user:**

- Click the name of the user you want to send the message to.
- Click the **Message** button. The Message dialog box displays.

Send Message

Meeting today at 1:00 pm.

Send   Cancel   Help
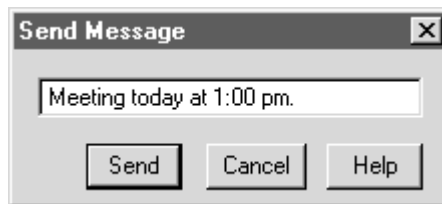
- Type the message in the Message box.
- Click **Send**. The message displays immediately on the screen of the selected user.

5. **To display shared files being accessed by a selected user:**

- Click the name of the user you want to view.
- Click the **Files** button. The Open Files by Volume window displays.
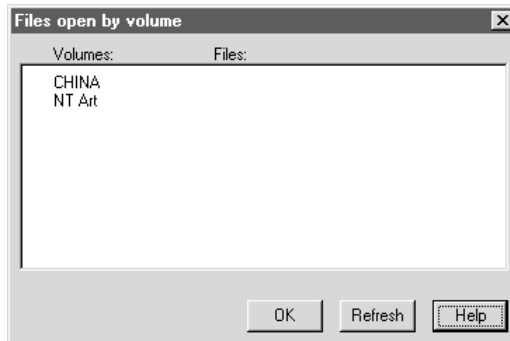
This window lists the shared volume(s) for the selected user and the file(s) within the shared volumes that are currently open.

- Click **Refresh** to immediately update the files list.
- Click **OK** to close the window.

Back up and Restore System Files

PC MACLAN system files cannot be backed up using a file back-up utility while the server is running. This is because PC MACLAN opens its system files in the Deny Write mode so that another application can not accidentally change them while they are in use.

To solve this, the Backup System Files feature is included. It will copy the server's system files (*.dat) to backup files (*.bak). The backup files (*.bak) can then be backed up by any backup utility.

To restore system files that were made by using the Backup feature of PC MACLAN, you will need to do the following:

1. Make sure the PC MACLAN File Server is not running.

2. Move the existing .dat and .idx files to a backup directory.

3. Rename .bak files to .dat and copy them into the PC MACLAN installed directory (default PC MACLAN).

4. Start the PC MACLAN file server. When you start the PC MACLAN file server, the restored .dat files will be rebuilt automatically.

To backup system files while PC MACLAN is running

1. **From the Start menu, point to Programs/PC MACLAN and select File Server.**

2. **Click Server in the menu bar.**

    The Server pull-down menu displays.
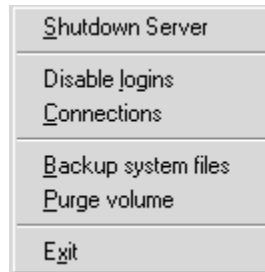
4. **Click the Backup System Files option**.

    The Backup System Files dialog box displays.
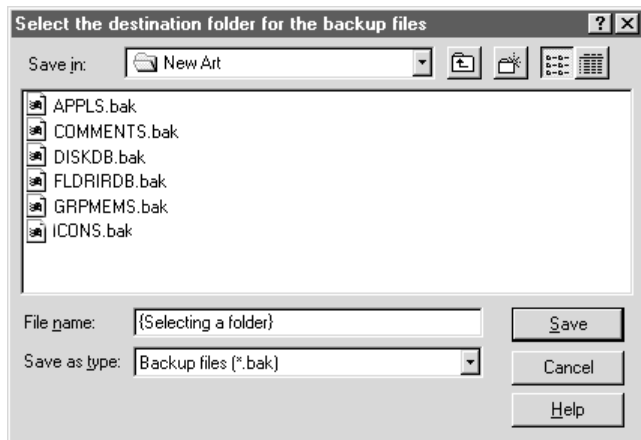
5. **Type the path of the backup directory in the File name field or leave the default shown in the Save in field.**

6. **Click OK.**

The *.DAT files are copied to *.BAK in the specified directory.

Purge Volume

The purge volume feature allows you to remove, from the system files, the information pertaining to a volume that is no longer being used. When you select a drive in the Purge dialog box, all shared volumes on the selected drive display. It is important to keep in mind that if you purge the entire drive, **all** references to the volumes on that drive are removed from the system files. It is a good idea to back up the system files, as described in the previous section, before purging a volume.

To purge a volume

1. **From the Start menu, point to Programs/PC MACLAN and select File Server.**

2. **Click Server in the menu bar.**

The Server pull-down menu displays.

```
Shutdown Server

Disable logins
Connections

Backup system files
Purge volume

Exit
```

3. **Click the Purge Volume option**.

The Purge all Mac information for a volume window displays a list of the local drives and the shared volumes on a selected drive.

4. **Click the drive that you no longer want to share and click OK.**

   A warning message displays.

5. **Click OK.**

   All references to the volume and the files on the volume are removed from the system files.

Exit the File Server

If you attempt to exit Windows before you shutdown the PC MACLAN File Server, a warning message displays giving you the opportunity to shutdown the file server.

To exit the PC MACLAN file server

1. **From the Start menu, point to Programs/PC MACLAN and select File Server.**

   The PC MACLAN Console window displays.

2. **Click Server in the menu bar.**

   The Server pull-down menu displays.

3.   **Click the Exit option**.

```
Shutdown Server

Disable logins
Connections

Backup system files
Purge volume

Exit
```

If the server is running, the following warning message displays.

```
Warning                                              ×

  ⚠    Server is running. Do you want to shutdown immediately?

              OK     Cancel
```
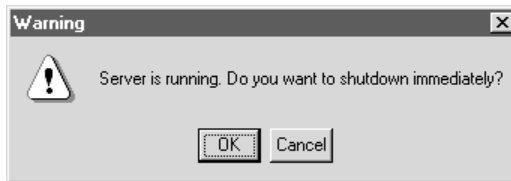
4.   **To shut down immediately, click OK.**

A message will display on the screen of each user logged onto the server.
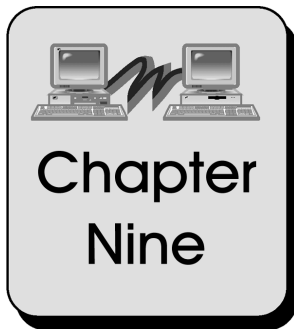
Chapter Nine

Using a Macintosh with PC MACLAN

This chapter explains how to set up the Macintosh for a network, how to log on and off, and how to use network files.

Topics include:

About the Macintosh Network

Turning on AppleTalk

Selecting a Network Connection Type

Naming Your Computer and Starting Sharing

Sharing a Folder

Logging Onto the PC MACLAN Network

Working on the Desktop

Setting Access Privileges for Your Folders

Logging Off the PC MACLAN Network

Using a Shared Printer

About the Macintosh Network

You can use LocalTalk, EtherTalk (Ethernet) or TokenTalk (Token-Ring) network connection types on the Macintosh. Every Macintosh computer comes with LocalTalk installed when you purchase it. Some also come with EtherTalk (Ethernet) already built-in. If you are uncertain about what your Macintosh contains, check the documentation that came with the computer or check with your system administrator. (Or, you can follow the procedure in the section titled *Selecting a Network Connection Type*. This will also tell you what network types are installed.)

If you are using Ethernet or Token-Ring on your PC, and they are not already installed on your Macintosh, you will have to install the proper adapter card and driver before you can connect to the Windows PC.

Once you have installed the proper hardware and connect the computer with the proper cables (see Chapter 3), you can set up your Macintosh to make use of the network. The remaining sections in this chapter explain how to do that.

For more detailed instructions on all of the procedures discussed in this chapter, refer to your Macintosh user manual.

Turning on AppleTalk

AppleTalk is the protocol the network uses to communicate between your Macintosh and a Windows NT system. As soon as you connect to the network and turn on your computer, AppleTalk on the Macintosh is turned on for you. However, there may be a time when you have to turn AppleTalk off to use some other software and then turn it back on to use the network again.

To turn AppleTalk on and off

1. **Click the Apple icon and select Chooser.**

   The Chooser window displays.
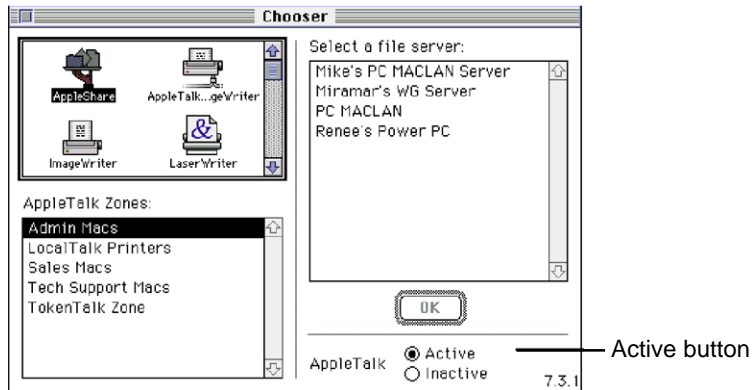
Active button

2. **Click the Active button to turn on AppleTalk. Or click the Inactive button to turn AppleTalk off.**

3. **Close the Chooser.**

   If you leave the Inactive button selected when you shut down your Macintosh, AppleTalk will automatically become active again when you restart your computer.

Selecting a Network Connection Type

LocalTalk is the default network selection on the Macintosh. If you installed EtherTalk or TokenTalk networking hardware and software, you have to select that connection type to let the system know you plan to use something other than LocalTalk.

You can switch between two connections at any time. In other words, you can have access to both a LocalTalk and EtherTalk network by selecting the network connection you want to use at the time.

To select a network connection type

1. **Click the Apple icon and select Control Panels.**

2. **Click the Network or AppleTalk option.**

The Network control panel displays an icon for LocalTalk, labeled LocalTalk built-in, and icons for any other network connection software that is built-in or installed.
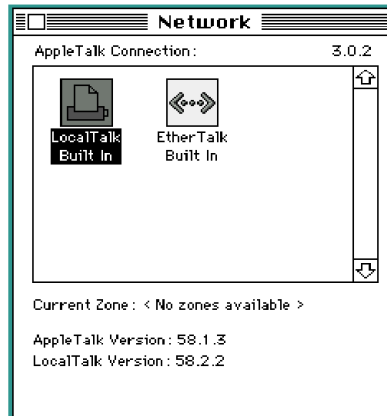
3. **Click the icon of the network connection type you want to use.**

   If you are changing from a currently selected connection type, e.g., from LocalTalk to EtherTalk, a warning message displays. The message means that the connections that are currently established will be stopped and you will have to reconnect to the network services on the new network.

4. **Click OK.**

   The network connection you selected is now in use.

5. **Close the Network control panel window.**

Naming Your Computer and Starting Sharing

The next step is to give your Macintosh a name that will identify your computer on the network. You must also indicate who owns the computer and designate a password.

In the same dialog box, you can turn on the sharing capability for your Macintosh.

To name your computer and start sharing

1. **Click the Apple icon and select Control Panels.**

2. **Click the Sharing Setup option.**

   The Sharing Setup dialog box displays.
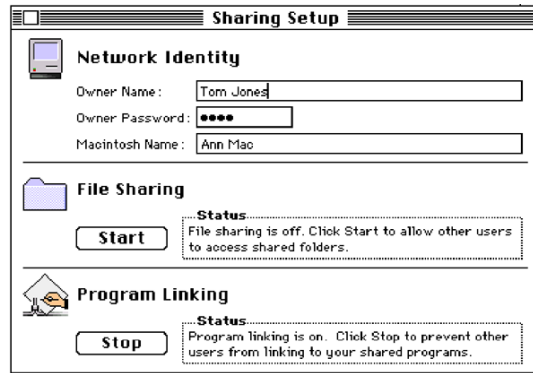
3. **In the Network Identity section:**

   • Type your name in the **Owner Name** field.
   • Type your password in the **Password** field (up to 8 characters).
   • Type the name for your computer in the **Macintosh Name** field.

4. **In the File Sharing section:**

   • If the button reads START. Click the button to activate file sharing.
   • If the button reads STOP. Leave it as is. File sharing is already active.

5. **Close the Sharing Setup control panel option.**

   You should next setup a shared folder or drive. You must indicate at least one shared folder or drive in order for the NT system to log on.

Sharing a Folder

If you are the owner of a folder on the Macintosh, a PC MACLAN client user cannot log onto the AppleTalk file server and share your folder unless you give the user permission.

To share a folder

1. **On the desktop, click the folder you want to share.**

2. **Open the File Menu and click the Sharing option.**

   A dialog box displays with the name of your folder in the top portion of the box.
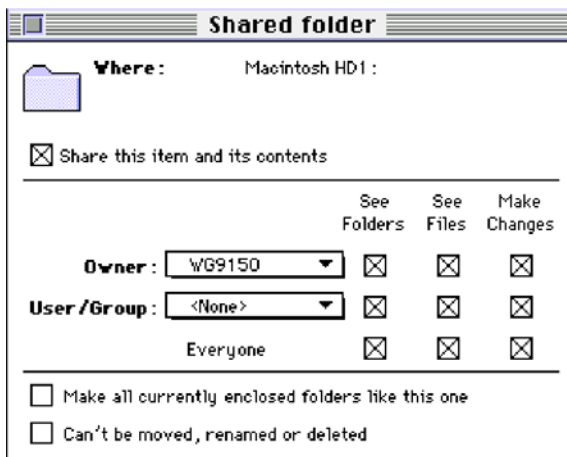
3. **Click the Share this item and its contents box.**

   The selected folder can now be shared with PC MACLAN Client users. For more information about access privileges, refer to the section titled *Setting Access Privileges for Your Folder*.

Logging On to the PC MACLAN Network

To access the Macintosh shared volumes with PC MACLAN Client, you need either a login name, or guest access to the Macintosh file server. If you are using PC MACLAN File Server, it must be set up first (see Chapter 5) before you can see the shared directories on your Macintosh desktop.

To use the PC MACLAN network features from the Macintosh, you must have completed the previous four sections in this chapter.

To log onto the file server

1. **Click the Apple icon and select Chooser.**

   The Chooser window displays.

2. **Click the AppleShare icon.**
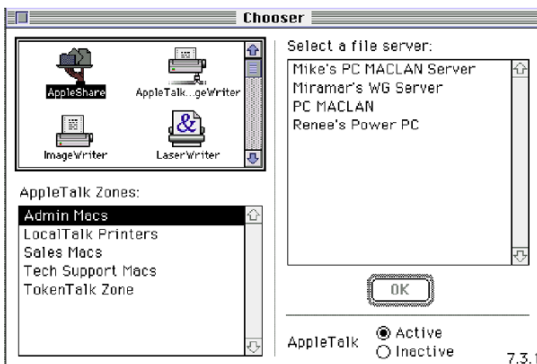
   If AppleTalk zones are available on the network, they appear in the AppleTalk zones list. When you click an AppleTalk zone, the file servers that are available appear in the Select a file server list.

   If your network does not use AppleTalk zones, only the file server list displays in the Select a File Server box.

3. **If AppleTalk zones appear, click the AppleTalk zone that contains the file server you want.**

The file servers are displayed in the Select a File Server list.

4. **Click the PC MACLAN file server and then click OK.**

The log on dialog box displays.
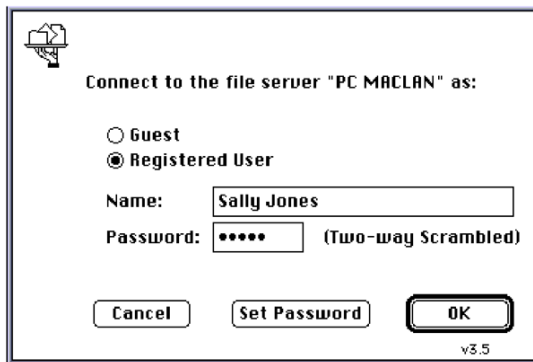
5. **To log in as a Guest, click the Guest button and then click OK.**

You do not have to enter a user name or password to gain access to the file server.

6. **To log on as a registered user, click the Registered User button, enter a user name and password and then click OK.**

The PC MACLAN Server volumes window displays all of the designated shared directories. (See Chapter 5 for details on how shared directories are set up.)

7. **Click the name of the shared directory (volume) you want to access.**

You must have access privileges for the selected volume.

8. **If you want your Macintosh to log on automatically at startup, click the box to the right of the volume.**

When you click the box, the log on Save settings display. If you do not select to save your name and password, you will be prompted to enter both at startup.

9. **Click OK.**

The PC MACLAN icon for the selected volume displays on your workstation desktop.

10. **Close the Chooser dialog box.**

Working on the Desktop

The PC MACLAN shared directory icons should now be displayed on your desktop. The icon may be used in the same manner as any other folder on the desktop.

To open the shared directory icon and files

1. **Double-click the icon.**

The folder window displays the contents of the folder. If the Windows NT user has elected to use PC MACLAN's File Extension Mapping feature, you will see familiar icons for the various files and applications.

2. **Perform all Macintosh functions as usual.**

No new procedures are required to create new folders or open files. If you are unable to open a file or an application, you may not have the proper access privileges for the volume you selected or you may not have the application. See the person who set up the access privileges on the PC MACLAN server.

Setting Access Privileges for Your Folders

When you create a new folder in a shared directory, you are considered the owner of that folder. As a result, you may specify who can use the files in that folder and what access privileges they can have.

You can give access privileges to one **user**, to a specific **group** of users, or to **everyone**. A group is a logical organization of users according to an activity or resource. The user or group must already be defined on the PC MACLAN server. In addition, you can specify the type of access privileges you want to assign. (See Chapter 2 for details about access privilege.)

To set access privileges for your folders

1. **Click the folder you want to set access privileges for.**

2. **Open the File Menu and select Sharing.**

   The Shared Files dialog box displays with your user name in the Owner field.
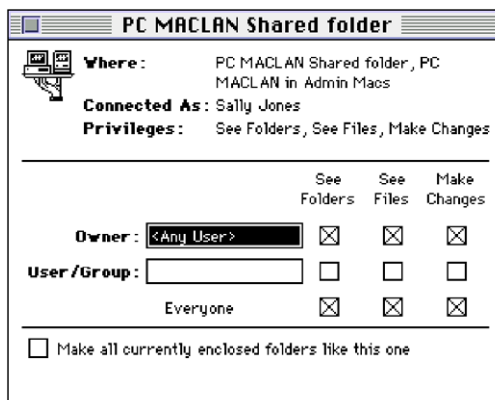
3. **To remain as the owner, leave your user name in the Owner field. To transfer ownership, type the new owners user ID in the Owner field.**

4. **Type the name of the user or group you want to assign privileges to in the User/Group field.**

   The user or group must already be defined on the PC MACLAN server. This does not include users and groups that are defined on the Macintosh Users and Groups control panel only.

5.   **Click the box next to each access privilege you want to assign to the owner, user or everyone.**

If you do not want access privileges assigned, leave the box blank.

6.   **To apply the same access privileges to all folders contained within the selected folder, click Make all Currently Enclosed Folders Like This One.**

7.   **If you do not want this folder to be moved, renamed or deleted under any circumstances, check the final box at the bottom of the dialog box.**

8.   **Close the dialog box.**

A message asking if you want to save the changes appears.

9.   **Click Save.**

Logging Off the PC MACLAN Server

When you want to log off the server, drag all server shared directory icons to the Trash. The server shared directory icons are cleared from the desktop. You have now completed the log off procedure.

Server Shutdown

If the server is going to be shut down, all current users receive an on-screen message warning that the shutdown will occur in a specified amount of time. Be sure to close or quit any files or applications you are using that are located on the server before the server shuts down.

Using a Shared Printer

Selecting a PC MACLAN shared printer is handled via the Macintosh Chooser. You do not have to be logged into the file server to make use of the print services.

To access a printer on the PC MACLAN network

1. **Open the Apple Menu and select Chooser.**

   The Chooser window displays.

2. **Click the printer icon that represents the network printer you want to use.**

3. **If the AppleTalk zones list displays, click the zone in which the desired printer is located.**

   All available printers and print spoolers display in the right-hand box.

4. **Click the name of the printer you want to use.**

   The selected printer name is highlighted. From this point on, all print jobs are automatically sent to the selected printer until a new printer device is selected.

Appendix A - Tips and Tricks

This appendix describes some common networking configuration problems and solutions to them.

Cable Malfunction

To test cable functionality, you can swap a section of cabling that is currently working for the existing cable. Some network adapters provide diagnostic tests that can detect cabling malfunction. (Check on the floppy disk that accompanied the adapter or contact the adapter manufacturer for further assistance.)

10base 2 cabling (also known as Coax) requires a 50 ohm terminator at each end of the cable run unless one end is connected to a repeater. Never connect a coax cable directly into a network adapter. A 'T' connector must be used, instead.

10base T cabling (also known as Twisted Pair) requires either a hub or a crossover cable to function correctly. This is not true if you are using the Etherwave technology from Farallon.

General Comments

When troubleshooting a network installation, it is best to set up with only the primary and necessary components. Connecting the NT system and a Macintosh directly provides tests for potential malfunction of intermediary devices such as hubs or routers. An improperly config- ured router for example, even though no need to communicate through it is required in an installation, can block the passage of information across the LAN just by the fact that it is part of the installation. Once determining that all parts are functioning properly, add other devices and components one at a time. In some cases, a network card may appear to be functioning properly to Windows, but the component that transmits the data across the cable may be nonfunctional.

LaserWriter Bridge

Apple has a free network utility called LaserWriter Bridge that is included in Apple's Network Software Installer 1.5 or greater (you can download this off their web site). This great little utility allows a Macintosh to share a LocalTalk based LaserWriter while also being on the EtherTalk network for file sharing. PC MACLAN or other Mac users can also share the LaserWriter. LaserWriter Bridge will not work for Macs on the LocalTalk or non-LaserWriter type printers. You would need to get the Local Bridge product either from Apple or Sonic.

NetExchange

NetExchange is another great free utility from Apple for your Mac that will enhance your networking environment. It provides file extension mapping for any files copied from a Windows machine running PC MACLAN onto a Macintosh that is running System 7.5 with PC Exchange. You can download NetExchange from Apple's web site.

Cross-over Cable

If you have only one Macintosh and one Windows NT system and you still want to run 10Base T (RJ-45) connectors for your network, you do not have to have an Ethernet hub. You can purchase a cross-over cable from most mail order catalogs or your dealer. It allows two machines to have a 10Base T network without a hub. To add a third machine, you will need a hub.

Alternate Font

If you have AppleTalk names (server, zone, volume, folder, or file) which contain characters from the upper character set, the default Windows font may display these characters as a rectangular block. The default icon font is MS Sans Serif. Changing the icon font to any MonoType font will more accurately display these names. The icon font is changed in the Display Control Panel. Select the Appearance tab and select the Icon item from the Item: pulldown list. Change the font to Arial.

Appendix B - Configuration Parameters

Parameters for AppleTalk Protocol

The AppleTalk protocol, has several settings that can be adjusted by the user. Generally the default settings are appropriate, but if your site creates unique circumstances you may need to adjust these settings. These settings may be added to the APPLETALK key in the Registry.

The protocol Registry key string is:

HKEY_LOCAL_MACHINE\SOFTWARE\Miramar Systems, Inc.\AppleTalk\

Below is a table of the parameter options and their possible settings:

	MAX	Min	DEFAULT	Explanation
BUFS	200	16	90	The number of buffers the stack has to transmit and receive packets.
ZONE				The zone you want your PC's servers registered.

If you have a complex networking environment, the settings below may need to be adjusted to improve address resolution. Do not change them unless you understand the ramifications.

AARPAGE	300	30	60	The number of seconds to age an AARP address entry before deleting it.
AARPRETRY	60	2	10	The number of times AARP will look for an address.
AARPINTERVAL	64	2	6	The number of increments (1/32 seconds) to wait between retries.
DDPCHECKSUM			FALSE	Determines whether to use checksums in DDP packet.

The protocol will save the currently used network and node number in the Registry. These settings do not need to be modified. They are shown for reference only.

During installation, the installer places the SERIAL key with the default value APPLETALK in the Registry.

Parameters for PC MACLAN Client

These parameters are located in the Windows NT Registry.

The client Registry key string is:

HKEY_LOCAL_MACHINE\SOFTWARE\Miramar Systems, Inc.\

Key	DEFAULT	Description
HIDERESFILES	FALSE	Files with resource forks are returned with hidden attribute set.
RETRY	75	Number of times to retry the request to the server.
INTERVAL	2	Number of seconds to wait between retries.
WARN DROP BOX ENUM	FALSE	If TRUE, displays a warning if Drop Box is accessed.
WARN RES FILE OPEN	TRUE	If FALSE, displays a warning if a Macintosh file with a resource fork is accessed.
DEFAULT FILE CREATOR	"dosa"	Passes this designator to the Macintosh OS for all PC files.
DEFAULT FILE TYPE	TEXT"	Passes this designator to the Macintosh OS for all PC files.

Additional parameters are listed in the PC MACLAN Client help file.

Parameters for File Server

The file server setup parameters are saved in the Windows Registry. The following parameters may be added. Some of them are updated when you change the server configuration in the user interface. Boolean parameters requiring a yes or no answer can use: Yes/No, I/O, On/Off, or True/False.

The Registry key string is:

\HKEY_LOCAL_MACHINE\SOFTWARE\Miramar Systems, Inc.\FileServer\Profiles\
ServerPawms\

Key	DEFAULT	Description
DIRAGE	20	The number of seconds to wait before checking for changes in a directory.
GUESTDISABLE	0	(Boolean) Disable guest logins.
IDLEINTERVAL	0	The time the server should wait to look for another message.
MACHINETYPE	0	The string is sent to the MAC when logging in.
MAXLOGINFAILS	5	The number of times a user can enter an incorrect password before being disabled.
MINPASSWORDLEN	0	The minimum length of a user's password.
NAME		The file server name.
OPENFILES	40	The number of files that can be opened at once by all users.
PASSWORDEXPIRATION	0	The number of days a user's password is valid. 0=Never expires.
SYSPATH	<installation directory>	The location of the .DAT and .IDX files.
SHUTDOWNTIME	10	The default time for shutdown in minutes.
SHUTDOWNQUERY	1	(Boolean) Determines whether to ask the user to shutdown when exiting.

Additional parameters are listed in the PCl MACLAN file server help.

Key	DEFAULT	Description
OPEN FILES	50	The maximum number of files that can be open at one time.
RANGE LOCKS	20	The maximum number of byte range locks available to multiuser applications.

Glossary

access privileges Set of privileges assigned to users of shared directories or folders enabling those users to view and make changes to the folders and their contents.

adapter See network adapter card.

AppleTalk Apple Computer's network architecture and protocols. Any network that has more than one Macintosh system and/or a server running MACLAN functions as an AppleTalk network.

AppleTalk Filing Protocol (AFP) The protocol that allows Macintosh users to share data files and programs located on a file server. PC MACLAN uses this protocol on a Windows computer, enabling both Macintosh and PC users to share files on the server.

client A computer that has access to services, such as AppleShare, on a network. A user of a client computer requests services, such as file transfer, from a file server. The software that makes your computer a client is included in the PC MACLAN program.

default A value, attribute, or option that is assumed when no option is explicitly specified.

directory (1) A list of files stored on a disk or diskette. A directory also contains information about the file such as size and date of last change. (2) A named grouping of files in a file system. On the Macintosh, directories are synonymous with *folders*.

driver Software that allows a peripheral, such as a adapter card, printer, or drive to function.

EtherTalk AppleTalk running on Ethernet

file extension mapping The association of a PC file name extension with a Macintosh file type and file creator. This enables the sharing of data files on the server by applications that have both PC and Macintosh versions.

file server A computer that provides file services such as file transfer or storage across a network. The software that makes your PC a file server is included in the PC MACLAN program.

folder A group of files and other folders. A folder is the Macintosh equivalent of a PC directory.

group A logical organization of users according to activity or resource access authority.

guest A user who is logged onto an AppleShare server without a registered user name and password. As a guest, a user may have limited access to the files and folders on the file server.

local area network (LAN) (1) Two or more computers connected for local resource sharing. (2) A network in which communications are limited to a moderate-sized geographic area, such as a single office building.

LocalTalk Apple's proprietary network hardware built into every Macintosh. It is an inexpensive way to connect Macs, printers and PCs.

NDIS Acronym for *Network Device Interface Specification*. A network driver architecture for Windows systems developed by Microsoft Corporation and 3Com.

network A configuration of data processing devices and software connected for information interchange.

network adapter card A card that allows your computer to connect to a network. Also called a *network adapter*.

Network interface card (NIC) See network adapter card.

password   A unique string of characters that a program, computer operator, or user must supply to meet security requirements before gaining access to data.

path The route used to locate a file on a disk or diskette. The route consists of a drive, directory and file name.

port Synonym for communication port or printer port.

print queue   An ordered list of the data files waiting to be printed.

print server A computer that provides printing services across a network and accepts print jobs from other computers. The software that makes your NT system a print server is included in the PC MACLAN program.

printer port A connector on a computer to which a printer is normally attached. Parallel data transmission is usually implied by this term.

protocol A "language" the computers use to communicate with one another. AppleTalk is the protocol used in MACLAN network software.

registry   In Windows NT, a database of configuration information used by the operating system and other software.

server   1) A computer on a network that provides facilities to other computers. 2) A computer that shares its resources with other computers on a network.

sharing   The ability to see folders, files, or make changes to a shared disk or folder across a network. Access privileges are granted by the owner of the shared item and are used to determine what other network users can do with the disk or folder and its contents.

spooler program   A program that runs in the background and sends print files, generated by the spool file, to the network printer for printing.

spool file   A file that emulates a printer port. The spool file accepts a print job as if it were a printer, but instead of printing the job, it is written to a file on the disk. Then the spooler program sends each print file to the network printer for printing.

user name   The unique name assigned to each user granted access to the LAN system. The system uses the user name to keep track of who is performing which operation.

volume   A drive or directory that is made available to AppleTalk users and is defined and named as a place to store files. A volume has a name and a directory path associated with it.

zone (1) Logical subdivisions of a computer network. These groupings of computers, printers and file servers on a network allow devices to be organized by, for example, location in a building. (2) A group of two or more networks in a single large network of many interconnected networks.

Index