

CanOPI 1.4

User Guide

For the Apple Network Server (AIX 4.1.x)

Information Presentation Technologies, Inc.

994 Mill Street, Suite 200,
San Luis Obispo, CA 93401
+1 (805) 541-3000

Information Presentation Technologies Europe BV

Turfpoortstraat 66, 1411 E H Naarden Vesting,
The Netherlands,
+31 35 694 9499

Information Presentation Technologies Ltd.

Suite 15, 8 Kings Court, Newmarket,
Suffolk, UK, CB8 7SG
+44 (1638) 663999

Manual version 1.7

Limited Warranty on Media and Replacement

All implied warranties on the media and manuals, including implied warranties of merchantability and fitness for a particular purpose, are limited in duration to ninety (90) days from the date of the original retail purchase of this product.

Even though Information Presentation Technologies, Inc. (IPT) has tested the software and reviewed the documentation, IPT makes no warranty or representation, either express or implied, with respect to the software, its quality, performance, merchantability, or fitness for a particular purpose. As a result, this software is sold “as is,” and you, the purchaser, are assuming the entire risk as to its quality and performance.

In no event will IPT be liable for direct, indirect, special, incidental, or consequential damages resulting from any defect in the software or its documentation.

The warranty and remedies set forth above are exclusive and in lieu of all others, oral and written, express or implied.

We are grateful to Frame Technology Corporation for supplying FrameMaker software with which we produced the camera-ready pages of this manual.

©1995-1996 Information Presentation Technologies, Inc.

AppleShare, AppleTalk, LaserWriter, SimpleText, EtherTalk, LocalTalk, and Macintosh are registered trademarks of Apple Computer, Inc.

Mercutio MDEF from Digital Alchemy

Copyright © Ramon M. Felciano 1992-1995, All Rights Reserved

PostScript is a registered trademark of Adobe Systems, Inc.

All other brand and product names are trademarks of their respective owners.

Contents

Welcome to CanOPI

What is CanOPI?	Preface-2
Product Components	Preface-3
Conventions in this Guide.....	Preface-4
Typeface Conventions.....	Preface-4
Other Conventions.....	Preface-5

Installing and Starting CanOPI

Helpful Reference Materials	Quick Start-8
System Prerequisites	Quick Start-9
Installing CanOPI	Quick Start-10
Additional Files	Quick Start-12
CanOPI Installation Example	Quick Start-14
MacApps	Quick Start-16
Acrobat Reader.....	Quick Start-16
Adobe OPEN	Quick Start-16
AlertDrvr	Quick Start-16
AppleTalk Services	Quick Start-16
Documentation	Quick Start-16
EasyAdmin	Quick Start-17
opiconfig.....	Quick Start-17
PrintQMgr	Quick Start-17
README	Quick Start-17

Using EasyAdmin

Starting EasyAdmin	EasyAdmin-20
Info Admin.....	EasyAdmin-25
Using Info Admin	EasyAdmin-25
Updating Your CanOPI Key	EasyAdmin-27
Users and Groups Admin.....	EasyAdmin-28

Creating & Editing CanOPI (AIX) User & Groups Accounts	EasyAdmin-28
Creating or Editing a Group	EasyAdmin-29
Deleting Groups.....	EasyAdmin-31
Creating or Editing a User Account	EasyAdmin-32
Deleting a User Account	EasyAdmin-33
File Sharing Admin	EasyAdmin-35
Creating & Editing uShare Servers and Shared Folders	EasyAdmin-35
Creating or Editing a uShare Server	EasyAdmin-37
Deleting a uShare Server	EasyAdmin-38
Creating or Editing a Shared Folder	EasyAdmin-40
Deleting a Shared Folder	EasyAdmin-45
Print Spooling Admin	EasyAdmin-46
Creating & Editing CanOPI Print Spoolers	EasyAdmin-46
Creating a Print Spooler	EasyAdmin-47
Defining Spooler Options	EasyAdmin-48
AppleTalk Spooler Options	EasyAdmin-48
UNIX Spooler Options	EasyAdmin-48
Output Device Options	EasyAdmin-50
More Options	EasyAdmin-52
OPI Options	EasyAdmin-56
Deleting a Print Spooler	EasyAdmin-58
Printer Accounting.....	EasyAdmin-58
 <i>Drag & Drop and OPI</i>	
Configuring & Using Drag & Drop.....	Drag & Drop-62
Configuring CanOPI Folders for Drag & Drop	
.....	Drag & Drop-62
Using Drag & Drop.....	Drag & Drop-68
CanOPI's OPI Processor	Drag & Drop-69
How OPI works	Drag & Drop-70

PrintQManager

Starting the PrintQManager Application	PrintQManager-72
Exiting the PrintQManager	PrintQManager-75
Using the “Window” Menu	PrintQManager-75
Changing Your User Authentication	PrintQManager-76
Monitoring and Controlling Printer Queues	PrintQManager-77
Viewing a List of Available Printers.....	PrintQManager-77
Identifying the State of Printers	PrintQManager-79
Viewing a Printer’s Queue	PrintQManager-80
Suspending and Resuming Jobs in Print Queues	PrintQManager-82
Deleting Print Jobs in Print Queues	PrintQManager-83
Moving Jobs between Print Queues	PrintQManager-84
Performing Administrative Tasks	PrintQManager-86
Controlling the State of Printers.....	PrintQManager-86
Reordering Jobs in a Print Queue.....	PrintQManager-88

Troubleshooting & FAQ

Troubleshooting Guide	Troubleshooting-90
Diagnostic Tools	Troubleshooting-90
Getting Help.....	Troubleshooting-99

Index

Welcome to CanOPI

This preface introduces CanOPI and describes it's server and client applications.

What is CanOPI?

CanOPI is IPT's integrated software system for storing, retrieving, and printing high-resolution images.

CanOPI enables MacOS clients to maintain a central archive of images. By using CanOPI's **Drag & Drop** feature, users can have low-resolution versions of high-resolution images generated automatically when the high-resolution image is placed on a network file server. Users may then use these low-resolution images as usual in their documents, clients print through CanOPI **print spoolers**.

These print spoolers include an **OPI** filter that interprets OPI comments in client print jobs and automatically substitutes high-resolution versions of the included images. Clients can monitor and control their print jobs with CanOPI's **PrintQMgr** application, and the **AlertDriver** init sends any printer error messages directly to the client originator of the print job.

Each element of the CanOPI system is designed for a multi-user production environment, so user names, passwords, and access rights are honored and easily managed with CanOPI's System Management module called **EasyAdmin**.

This integrated system, through which clients manipulate low-resolution versions of images, results in dramatic reduction of network traffic and of processing overhead on client machines. And the easy access to this system provided by CanOPI's client applications further expands the resources and productivity of your network and users.

Product Components

IPT's family of services integrate your MacOS and UNIX networks. Some services are enabled separately as indicated (contact your sales representative for details):

uShare

This module provides basic AppleTalk connectivity for your UNIX host. uShare's **file server** service lets your UNIX host appear to your MacOS users as an AppleShare file server. With uShare's **uPrint spooler**, your Apple Network Server and MacOS users can share printers on your network. Your CanOPI administrator configures and controls uShare services with the **EasyAdmin** application for the MacOS.

Drag & Drop Low Resolution Placement

This module allows users to move their high-resolution images to a network file server and have low-resolution OPI For Position Only (FPO) images automatically generated for use in page layouts.

OPI Processor

This module interprets OPI comments in clients' print jobs and automatically substitutes high-resolution versions of included images. Clients access this feature simply by printing through CanOPI print spoolers from applications that support OPI.

EasyAdmin

EasyAdmin is part of IPT's graphical interface for system and network administration. EasyAdmin provides an easy to use, MacOS based set

of tools, that let you configure and control uShare services and manage user accounts and groups.

uPrint Print Spooler Service

uShare's uPrint Print Spooler service lets MacOS and UNIX users share PostScript printers on your AppleTalk and UNIX networks. The MacOS users select uShare spoolers with the Chooser desk accessory, while UNIX users use their familiar print tools and commands.

PrintQManager

PrintQManager is part of IPT's graphical interface for print queue administration. PrintQManager provides an easy to use, MacOS based set of tools, that allows administrative control of CanOPI print spoolers. PrintQManager also allows individual users to control their own jobs in the printing queue, as well as resubmit finished jobs.

Conventions in this Guide

Typeface Conventions

Throughout this guide, several conventions are followed:

- UNIX commands you enter at a command line appear in the **Courier Bold** typeface and are preceded with a pound sign (#) representing the UNIX shell prompt, for example:

```
# cd /ushare/bin
```
- File names and DOS commands in the text appear in **Courier bold**, for example:

```
/ushare/etc/mtab
```

- Keys you are prompted to press appear in bold face type, for example: Press the **‘Shift’** key.
- UNIX shell output and the contents of editable files appear in the **Courier bold** typeface.
- The chapter section headings are indicated by **Helvetica Bold** typeface, aligned flush with the left side of the page.
- Each chapter section is split into individual topics, as indicated by the **Helvetica Bold Underline** typeface, at the beginning of each new topic.
- *NOTES*, that include helpful advice, pertinent information about configuration, and warnings, are indicated by the *times italic* typeface.
- Menu names and options are indicated in bold type, for example: Choose the **‘New’** option from the **‘File’** menu.
- Buttons within dialog boxes and the like appear in bold type, for example: When you have selected the desired options in the **‘Print’** dialog box, click **‘OK’**.
- References to other sections in the guide are printed in bold, italic typeface, for example: see the **‘Advanced Settings’** section of this guide.

Other Conventions

- When you're instructed to “edit the **<namedfile>** file...” you are expected to open the named file with a text editor such as **vi** or Open Windows' **Text Editor** program, make the indicated changes, and save the file.

- When you're instructed to “issue the following command at a UNIX command line,” you are expected to be running a C-shell, or the like, on your Apple Network Server and issue the indicated command.

Installing and Starting CanOPI

This chapter provides all the information you need to install and start CanOPI on your Apple Network Server, including sections on:

- a list of helpful reference materials,
- installing and starting CanOPI,
- an installation example, and
- the contents of the “MacApps” volume.

NOTE *If you have previously used an AFP server package for your Apple Network Server, other than IPT’s uShare or uShare products, you must completely de-activate its services before proceeding with your installation. This includes preventing the software from starting automatically after re-boot, as well as unloading any kernel modules it may install to in order to function.*

Helpful Reference Materials

Your CanOPI manual focuses mainly on the installation, configuration, and operation of CanOPI itself. Below are some suggestions for more in-depth reading on AppleTalk networking:

- For an in-depth description of AppleTalk networking, read Apple Computer, Inc.'s *Planning and Managing AppleTalk Networks*.
- For instructions for installing and using AppleTalk networking software on MacOS clients, read Apple Computer, Inc.'s *AppleShare User's Guide*.
- For detailed technical information about AppleTalk networking, protocols, and routing, read Apple Computer, Inc.'s *AppleTalk Phase 2 Introduction and Upgrade Guide*, and *Apple Internet Router Administrator's Guide*.

System Prerequisites

- If you plan to use the EasyAdmin feature, you will need a 68020 processor or greater, in your MacOS client machines. You will also need to install the MacOS version 7.5 or later.

Installing CanOPI

To install CanOPI on your Apple Network Server, use the installation application included on the CanOPI CD-ROM.

- 1. Insert the CanOPI CD-ROM into your Apple Network Server.**
- 2. Log on to your Apple Network Server as “root”.**
- 3. Ensure that AppleTalk is installed and running on your Apple Network Server.**

Apple Network Server systems do not ship with AppleTalk already enabled or even installed. If AppleTalk and the AppleTalk Remote Utilities are at least installed (but AppleTalk is not enabled), CanOPI will automatically start AppleTalk on the built-in Ethernet interface and configure it to always start automatically. If AppleTalk is started by CanOPI in this way, the Apple Network Server default name of “localhost” is changed to “IPT Apple Network Server”. If you already have a server on your network with this name, then a “1” or “2” (and so on) will be added to the name in order to guarantee a unique server name.

If AppleTalk is already up and running, with the default server name of “localhost”, CanOPI does not change it. Refer to “Setting Up AppleTalk and AppleTalk Services” in the manual “Using AIX and AppleTalk Services on Apple Network Server”.

- 4. Ensure that enough disk space is configured.**

Apple Network Server systems have been shipping with only a minimum amount of the available hard disk space allocated (usually only 512 MB out of a possible 2 or 4 GB). If you don’t have enough disk space, the installer will automatically add enough disk space to existing partitions or create new partitions using smit

(refer to “Using System Administration Tools” in the manual “Using AIX and AppleTalk Services on Apple Network Server”) or the “Disk Management Utility” (refer to “Managing File Storage” in the manual “Using AIX and AppleTalk Services” -- note: the Disk Management Utility is by far the easiest to use), ensure that a Logical Volume/File System (usually “/usr” or “/home”) has enough free disk space to install (at least 25MB free) and that “/var” (used for spooling) has enough space allocated to it to accommodate the size and number of print jobs that you want to keep a history of, or reprint later. If you haven't already, you will also want to give disk space to whatever LogicalVolume/FileSystem(s) (usually “/home”) you choose to have the File Server publish so that you have room to store files on the Server.

5. Mount the CD-ROM.

Mount the CD-ROM by issuing the following AIX command:

```
mount -r -v cdrfs /dev/cd0 /mnt
```

6. Run the CanOPI installation application.

Run the installation program by issuing the following AIX command:

```
sh /mnt/install
```

7. Follow the on-screen instructions.

Follow the instructions to install the CanOPI software. This is a single-user “Try and Buy” version of IPT’s uShare File and Print servers. A software activation key is required to allow more users or to evaluate other IPT products, such as the CanOPI OPI server. To request a key or get help, contact IPT at (805) 541-3000 in the U.S., +44 1638 663999 in the U.K., and +31 35 694 9499 in the rest of Europe. You will be issued a key that should be entered during installation, but can be entered later via the UNIX command “/ushare/bin/ussetkey=<newkey>”, or via the EasyAdmin administration program.

When the software has been installed, you will find that an Apple-Share server called CanOPI_<hostname> will appear in your MacOS Chooser, in the AppleTalk Zone that is local to your CanOPI host. You can log on to this server as “root” (or any other available user) and a default volume will be found called “MacApps”.

This volume contains the MacOS applications required to configure and manipulate the server (refer to the EasyAdmin chapter in this guide). This volume also contains a copy of the CanOPI “Administrator and User Guide” in Adobe Acrobat PDF format and the required reader for accessing the document in the folder “Acrobat Reader”. For a complete description of the contents of the “MacApps” volume, see the “MacApps” section on page **Quick Install-17**.

Additional Files

In order to realize the full functionality of CanOPI, you must also install the following files on your MacOS client machines.

1. Open the ‘**MacApps**’ volume (see above) and:
 - Copy the ‘**Network Server Passwd Tool**’ to the MacOS machine’s local hard drive’s ‘**System Folder>Extensions**’ folder (this file is available in the ‘**MacApp>Easy-Admin>Copy to Extensions**’ folder).
You can either copy this file directly to the ‘**Extensions**’ folder, or drag and drop it into the ‘**System Folder**’ and have the MacOS automatically place it in the ‘**Extensions**’ folder.
 - Copy the ‘**AlertDrvr**’ file to the MacOS machine’s local hard drive’s ‘**System Folder**’ folder (this file is available in the ‘**MacApps**’ folder). This ensures that print jobs from the MacOS machine are properly identified for error messages and such.

- Copy the **'opiconfig'** file to the MacOS machine's local hard drive's folder where you will be placing high-resolution images for automatic low-resolution For Placement Only (FPO) image generation (this file is available in the **'MacApps'** folder).
- If you have Adobe OPEN, copy the "CanOPI OPEN config" file to the Adobe OPEN "OPEN configuration Files" folder on the Adobe OPEN controller (this file is available in the **'MacApps>Adobe OPEN'** folder).
- Restart the MacOS client machine so these changes can take effect.

Installation Is Complete!

CanOPI Installation Example

This is an example of a local CD installation to an Apple Network Server named "localhost".

```
# mount -r -v cdrfs /dev/cd0 /mnt
# sh /mnt/install
```

This command
mounts the CD-ROM

This command runs the
installation application

At this point, the installation application runs and the following on-screen text appears:

```
uShare4.1c+CanOPI1.4d-EA for Apple Network Servers
Read the install notes? n
Are you sure that you want to install uShare 4.1c+CanOPI 1.4d-EA
for Apple Network Server's running AIX_4.1 onto localhost [Y/n]? y

uShare 4.1c+CanOPI 1.4d-EA requires 32735K free
Here is a list of file systems with enough free space:
    1) /data2 (on /dev/lv01) with 392880K free
    2) /usr (on /dev/hd2) with 34144K free
    3) /home (on /dev/hd1) with 33688K free
You may pick a number or enter a path.
Where would you like to create ushare for uShare 4.1c+CanOPI 1.4d-EA (/usr)?
Okay to create directory "ushare" in "/usr"? y
Preparing to extract media...

Reading file 1 header...data...Done
Getting file list.....Comparing files.....
mkdir "/usr/ushare/EasyAdmin"
mkdir "/usr/ushare/MacApps"
mkdir "/usr/ushare/MacApps/.Obsolete"

Installing EasyAdmin/.iptadminrc...
Installing etc/timeoffset.mac...
```

At this point, you will see a long list
of directories and files that are being
installed on your machine.

Checking system configuration...

If you would like uShare to automatically start every time the machine is rebooted, then answer yes to the following question. Regardless of what you choose now, you can enable or disable autostarting later simply by running

/ushare/bin/usautostart on

or

/ushare/bin/usautostart off

Automatically start uShare at boot time? [Y/n] y

Autostart already enabled

Start uShare now? (Y/N) y

Only users who have answered "yes" to this option will see these final messages.

Running usstart...

hostid 0x23805e4c

This is a single user 'Try and Buy' version of IPT's uShare File server. To evaluate the system with more users or to evaluate other IPT products such as the Print server or CanOPI OPI server, contact IPT for an enabling key.

Starting uShare+CanOPI daemons....

starting errmgr

errmgr.

Starting OPI Server processes:iptopisrvrd

afp.No volumes to process

:iptevtlogd

uShare+CanOPI: Starting AFP server 'IPT Apple Network Server'.

Looking for (IPT Apple Network Server)

.

splr.startsplr: No printers defined. Exiting

opi.Starting OPI Server processes:iptopisrvrd

open.

Installation of uShare 4.1c+CanOPI 1.4d-EA successful

At this point, your installation of CanOPI is complete. If you have any CanOPI patches to install, do so now. For advanced network configuration adjustments please see the Apple User Guide. To customize your newly installed software, go to the chapter entitled: "Starting EasyAdmin", on page **EasyAdmin - 20**.

MacApps

Upon installation of CanOPI, you will find that an AppleShare server called CanOPI_<hostname> will appear in your MacOS Chooser, in the AppleTalk Zone that is local to your CanOPI host. You can log on to this server as “root” (or any other available user) and a default volume will be found called “MacApps”.

This volume contains the following files and folders:

Acrobat Reader

Folder containing the Adobe Acrobat Reader application.

Adobe OPEN

Folder containing the “CanOPI OPEN config” file. If you have Adobe OPEN, this file should be copied in to the “OPEN Configuration Files” folder on your Adobe OPEN controller.

AlertDrvr

Copy this file to the MacOS machine’s local hard drive’s **‘System Folder’** folder. This ensures that print jobs from the MacOS machine are properly identified for error messages and such.

AppleTalk Services

Folder containing any MacOS applications or files that were installed as part of the Apple Network Server installation that Apple provides. Apple’s “Disk Management Utility” for the Apple Network Server is normally here, but it may be part of a self-extracting archive (e.g. AppleTalk_Services.sea) which may be in BinHex 4.0 format (e.g. AppleTalk_Services.sea.hqx).

Documentation

Folder containing Adobe Acrobat .pdf versions of our documentation.

EasyAdmin

Folder containing IPT's EasyAdmin and ScriptableAdmin suite. Copy the entire contents to your hard disk.

This folder also contains a "Copy to Extensions" folder that contains a file named "Network Server Passwd Tool". Copy this file to your MacOS machine's local hard drive's "System Folder" in order for EasyAdmin to authenticate with the Apple Network Server.

The MacOS machine must be restarted for the tool to become active.

Also in this folder is a "ScriptableAdmin" folder containing the ScriptableAdmin application, several example scripts, and documentation in Adobe Acrobat .pdf format. Please refer to this documentation for more information on ScriptableAdmin.

opiconfig

File that must be copied to the MacOS machine's local hard drive's folder where you will be placing high-resolution images for automatic low-resolution For Placement Only (FPO) image generation.

PrintQMgr

Folder containing IPT's PrintQManager application that connects to IPTPrintServ on the uShare server to manage the server's print queues.

README

Text file describing the contents of the "MacApps" volume.

NOTE *You must restart the MacOS client machine after copying the appropriate files, above, so your changes can take effect.*

Using EasyAdmin

IPT's EasyAdmin application lets you configure and control Apple Network Server services from a MacOS computer on your network. You can find EasyAdmin in the CanOPI volume "MacApps", automatically published by your Apple Network Server upon CanOPI installation. This chapter gives instructions for starting EasyAdmin and it's associated features:

- Info
- Users & Groups
- File Sharing
- Print Spooling


NOTE *If you have just installed the AIX operating system on your Apple Network Server, and have not yet created any groups, then by default you must login as "root" to use EasyAdmin.*

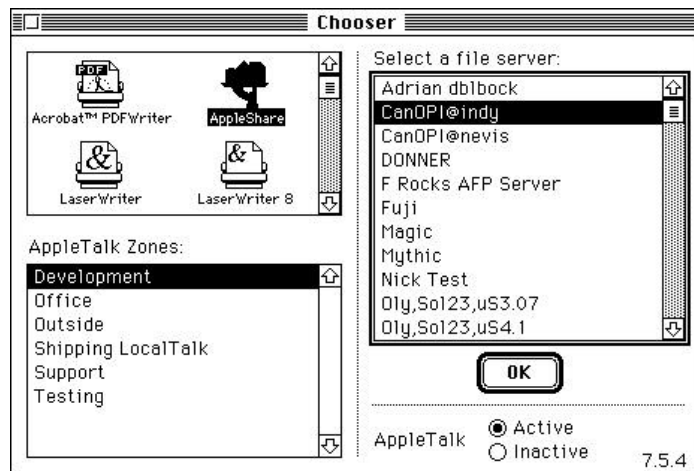
For full-function access to EasyAdmin for a particular user or users (other than at the "root" level), you must create a group called "IPTAdmin" and add these users to the "IPTAdmin" group. Only those users who log on as "root" or as a member of the "IPTAdmin" group can achieve the full-functionality of EasyAdmin.

*For details on creating a group, and adding users to a group, see "Users and Groups" on page **EasyAdmin-28**.*

Starting EasyAdmin

After installing CanOPI on your Apple Network Server, you will need to access the server to use EasyAdmin. Use the Chooser on your MacOS machine to locate your Apple Network Server, and mount the “MacApps” volume on to your desktop (you need not use the “Chooser” to mount volumes if you have and prefer to use another utility such as “PowerTalk”). Inside “MacApps” is the EasyAdmin folder.

1. Click on the “” menu and select the “Chooser” option. This will display the Chooser window.
2. Click on the AppleShare icon and find your Apple Network Server. If your network consists of many zones, you will find that your Apple Network Server resides in the zone associated with the it’s physical subnet (if you aren’t sure you may simply select each zone until you find the server).

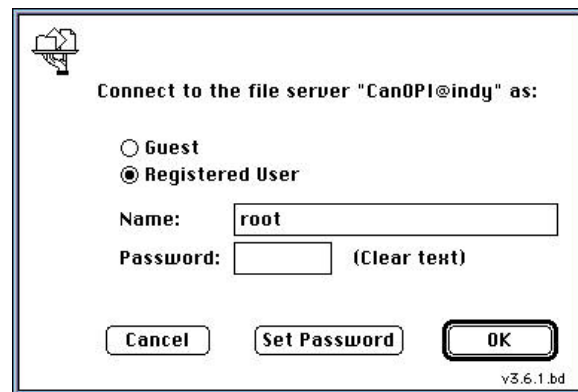


You will find it listed as “CanOPI_<hostname>” (where <hostname> represents the name of your Apple Network Server. The default name for an Apple Network Server is “localhost”, however, in most circumstances uShare will change this to “IPT Apple Network Server” (unless the ppcd is already up and running as “localhost”).

When you have found your Apple Network Server, select it and click the “OK” button.

NOTE *If the default CanOPI server cannot be located in the MacOS Chooser, see the “**Troubleshooting**” section for suggestions.*

3. You will be asked to login with your UNIX username and password, or you may login as “root”.



4. In either instance, you will see the volume “MacApps” is available to mount. Users who do not login as root will also see their UNIX home directory published as a volume called “YourHome (<username>_<hostname>). Root’s home directory is not published by default.



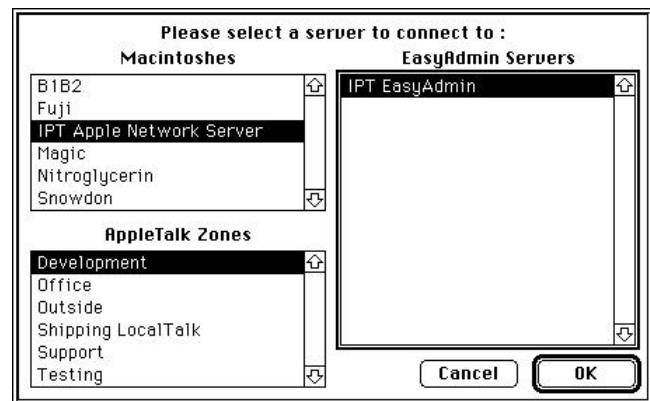
5. Select the “MacApps” volume. This is a default volume that is published automatically by CanOPI. MacApps will be mounted on your MacOS machine’s desktop.
6. Double-click on the MacApps volume that now appears on your desktop. Drag and drop the EasyAdmin folder inside directly to your desktop to copy it to your local machine. Open the folder and click on the “EasyAdmin” icon to launch EasyAdmin.

Double-click here to launch EasyAdmin



NOTE Full-function access to EasyAdmin is restricted to “root” or users who are part of the group “IPTAdmin”. Therefore, if you wish to enable access to EasyAdmin for a particular user (or users), you must create a group called “IPTAdmin”, then add those users to this group. For details on creating a group, and adding users to a group, see “Users and Groups” on page **EasyAdmin-28**.

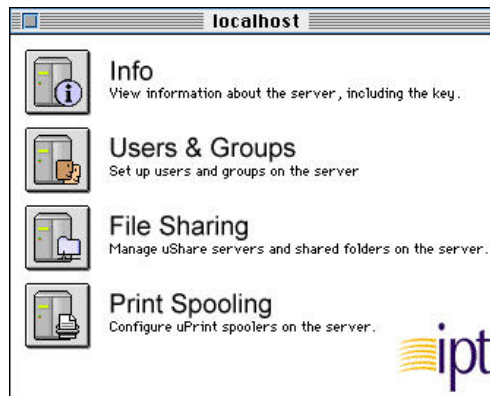
7. You will be asked to “Select a Network Server”. Navigate to your Apple Network Server in the “Macintoshes” window, then select the appropriate AppleTalk zone until you find the server named “IPT EasyAdmin”. Select it and click “OK”.



8. Log on as “root” (no password required by default, but we strongly recommend that you assign one as soon as possible, since “root” is the highest AIX access level attainable) or as a member of the “IPTAdmin” group (if you have previously created it).



After logging in, the "EasyAdmin" window appears:



The "EasyAdmin" window consists of buttons that represent tools that let you configure individual CanOPI services. The remainder of this section will provide you with step by step instructions for creating and managing CanOPI file servers, folders, and print spoolers. If you have just completed installation of your software, turn to the next page to begin customizing your CanOPI environment.

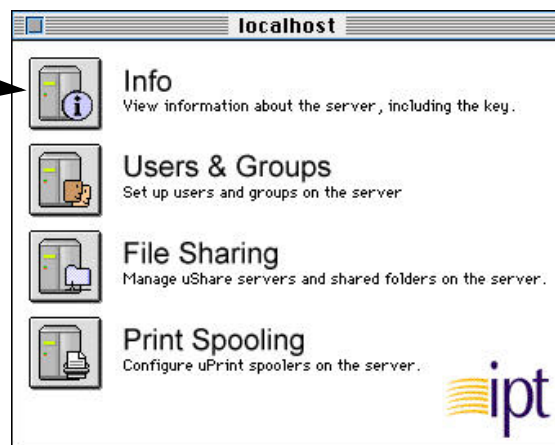
Info

Using Info

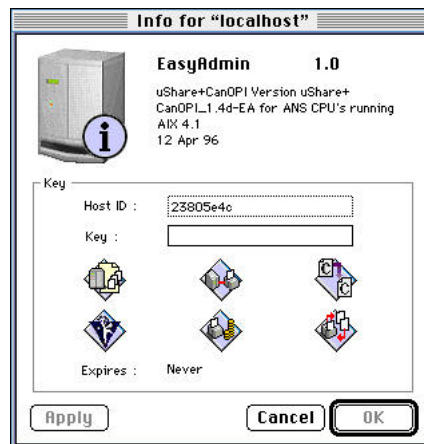
CanOPI's Info feature lets you update your key, verify your Apple Network Server's host id, and see at a glance which IPT software services are available on your network.

You may view the Info feature by clicking the EasyAdmin window's "Info" button:

Click here to launch the "Info" feature and access Key and other information.



EasyAdmin will display the "Info" window:



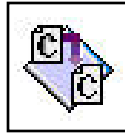
The Info window displays information regarding the version of EasyAdmin you are running, the Apple Network Server's host ID number, your Key, and a series of icons representing IPT software services. These services are installed on your Apple Network Server when you install CanOPI, whether they are enabled for use on your network or not is a function of your particular Key. If an icon is "grayed out", that particular service is disabled.



uShare - This module provides basic AppleTalk connectivity for your Apple Network Server. uShare's file server service lets your Apple Network Server appear to your MacOS users as an AppleShare file server.



uPrint - CanOPI's uPrint Print Spooler service lets MacOS and AIX users share PostScript printers on your AppleTalk and UNIX networks. The MacOS users select CanOPI spoolers with the Chooser desk accessory, while UNIX users use their familiar print tools and commands.



CanOPI - This module interprets OPI comments in clients' print jobs and automatically substitutes high-resolution versions of included images. Clients access this feature simply by printing through CanOPI print spoolers from applications that support OPI.



TurboTalk - TurboTalk provides greatly improved performance of all file copy operations to or from any other Macintoshes that have TurboTalk running or your Apple Network Server. This includes Finder copies, opens, and saves; and application launches from any networked volume.



Printer Accounting - The Printer Accounting feature allows the user to access a log of all print activities for each print spooler. Printer Accounting displays information such as the name and login of the user that initiated the print job; the spooler name; the document title; number of pages; and when the print job was queued, spooled, and finished.



PrintQManager - PrintQManager is part of IPT's graphical interface for print queue administration. PrintQManager provides an easy to use, MacOS based set of tools, that allows administrative control of CanOPI print spoolers. PrintQManager also allows individual users to control their own jobs in the printing queue, as well as resubmit finished jobs.

NOTE To contact IPT and purchase an authorization Key that will enable currently disabled services, see the "Getting Help" section on page *Troubleshooting-99*.

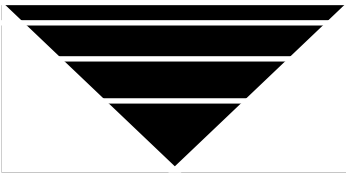
Updating Your CanOPI Key

Your Authorization Key is unique to your Apple Network Server and governs what CanOPI services you can provide to your network. To set your key, edit the "Key" field and click the "OK" button.

Users and Groups

CanOPI QuickTIP

To allow users other than “root” to use EasyAdmin, use the instructions to the right to create the group “IPTAdmin”. You may then add the desired users to this group as described “Creating or Editing a User Account” on page **EasyAdmin-32**

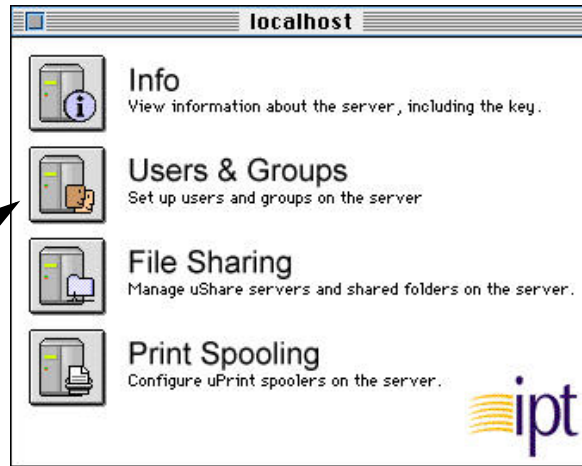


Creating & Editing CanOPI (AIX) User & Groups Accounts

In order to make best use of CanOPI’s File Sharing services, MacOS users should have user accounts on the Apple Network Server. EasyAdmin’s Users and Groups feature lets you create, modify, and remove user and group accounts. If the UNIX groups and user accounts for your MacOS users already exist on your Apple Network Server, you may proceed to page **EasyAdmin-37**, “Creating and Editing CanOPI File Servers”.

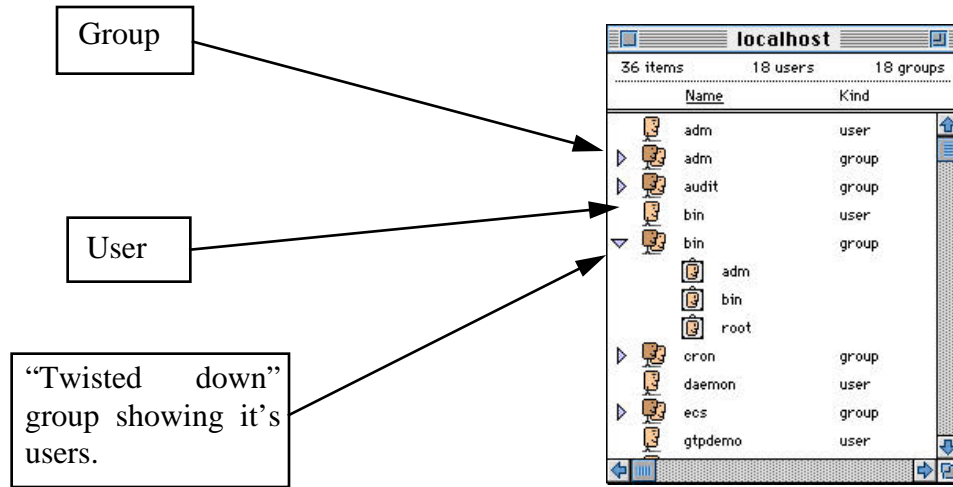
Launch EasyAdmin’s Users and Groups feature by clicking the EasyAdmin window’s “Users & Groups” button.

Click here to launch the “Users and Groups” feature.



Log on to the “IPT EasyAdmin server” as one of your administrative users (if you have created these accounts), or as “root”. The “Users and Groups” window appears, containing a list of your Apple Network Server’s groups and user accounts. Notice that the “Users and Groups”

window displays the name of your Apple Network Server in the title bar.



You can “twist down” the triangle to the right of each group to see the users in that group.

Creating or Editing a Group

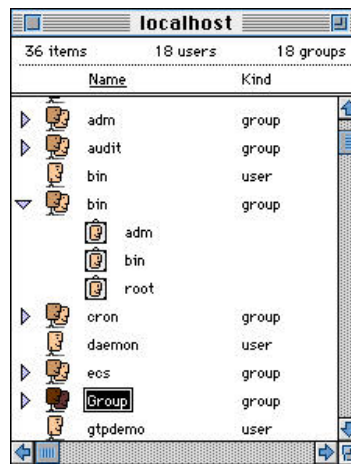
Before creating user accounts for your MacOS users, it is a good idea to define the group or groups that they will be a member of. These groups allow you to control the ability to see files and folders, and make changes to, items that are owned by a user that is a member of the same group. If you plan to use existing Apple Network Server groups with user accounts, you may refer to page **EasyAdmin-32**, to create and edit your UNIX user accounts.

NOTE The example below is for creating a new user group with EasyAdmin. Editing an existing group involves identical field definitions. To edit an existing group, double-click on a group from the provided list, and change parameters in the “Group” window. Use the steps below as a

key to the field definitions. You can edit an existing group without opening it's "Group" window, if all you want to do is modify the users that belong to it.

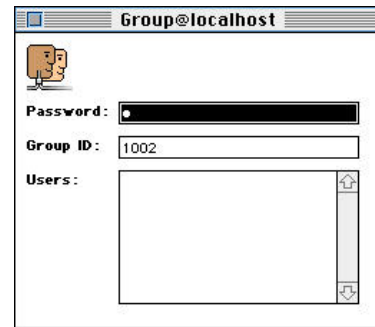
To create a new group on your Apple Network Server, choose "New Group" from the "File" menu. A new group will appear in the "Users and Groups" window with the default name of "group". If "group" already exists, EasyAdmin will create a group named "group1" or "group2", and so on, until a unique group name is created.

Newly-created group with default name of "group".



You can change the name by typing in text as you would any MacOS folder or file. You can add users to a group by dragging and dropping them into a particular group. You can see which users are a part of a group by clicking on the triangle adjacent to that group to "twist it down" and display it's users.

Double-click on your new group to display it's "Group Options" window.



You can enter the appropriate information in the fields:

1. **Password** - This is a password associated with this group.
2. **Group ID** - This is a unique group ID number. It is set automatically when creating a new group and should only be changed if absolutely necessary.
3. **Users** - This is a list of all currently defined users that are part of the group. To add an existing user to the group, drag and drop them into this field.

Closing the window saves your changes. To cancel your changes, press the “Escape” key.

Deleting Groups

To delete a group on your Apple Network Server, use the mouse to drag and drop that group from the “Users and Groups” window to the “Trash”.

NOTE *EasyAdmin does not allow you to delete the group “nogroup”.*

CanOPI QuickTIP

To allow users other than “root” to use EasyAdmin, follow the instructions on page **EasyAdmin-29** and create a new group called “IPTAdmin”. Then, use the instructions to the right to add the desired users to this group. Do not set “IPTAdmin” as a user’s primary group.

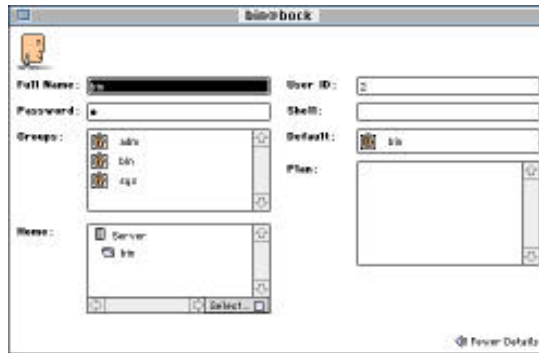


Creating or Editing a User Account

The example below is for defining a new user account with EasyAdmin. Editing an existing user account involves identical field definitions. To edit an existing user account, double-click on that user’s name in the “Users and Groups” window. Use the steps below as a key to the field definitions.

To create a new user account, choose “New User” from the “File” menu. A new user will be added with the default name of “user”. If “user” already exists, EasyAdmin will create a group named “user1” or “user2”, and so on, until a unique user name is created. You can change the name of this new user to anything you like by typing in the appropriate text.

Double-clicking on any user causes EasyAdmin to display it’s “User Options” window:



Enter appropriate data in the fields (see “User Account Attributes” on page **EasyAdmin-34** for a complete description of these fields):

1. **Full Name** - Modify the name to be used for login on the Apple Network Server.
2. **Password** - Enter a password to be used with this UNIX account. If you are editing an existing account, the password will appear as bullets (•).

3. **Groups** - This list box displays all groups to which the user belongs.



4. **Home** - This is the user's home folder. If the yellow warning icon shown at left appears, the path to the folder, or the folder itself no longer exists. Click on the "Select..." button to display a browser window that will allow you to locate the folder.

Click on the "More Details" triangle to display these additional fields:

5. **User ID** -This number will be filled in automatically when creating a new user. It is a unique user identification number.

6. **Shell** - This defines the AIX shell used when logged in at the Apple Network Server. `/bin/false` is the default. This setting prevents the user from logging in at a AIX terminal. You may change this setting if you wish to define an alternate shell for your user.

7. **Default** -This group is the user's default group. You can change a user's default group by dragging and dropping another group to this field from "Users and Groups" window.

8. **Plan** - A section of text that the AIX command "finger" accesses and displays.

Close the window to save your new user account and all information that you entered.

Deleting a User Account

Select the account name of the user whose account you want to delete in the "Users and Groups" window. Drag and drop that user to the "Trash" to delete their account.

NOTE *EasyAdmin does not allow you to delete the user "root".*

User Account Attributes

Attribute	Description
Full Name	The name by which the user is known by other users of your Apple Network Server. This is your “long name”, which is used when logging on at your MacOS machine. This is different from your “short name”, which is what you must use when logging on at the Apple Network Server itself
Password	<p>An alphanumeric string, known only by the user, that controls access to the user's account. In “secure” environments, make sure the selected password meets standards for your network. If you are not sure if this is a concern, ask your Network Administrator for more details. This field can be left blank</p> <p>To prevent a user from logging in from a MacOS machine, this field may be set to “*”.</p>
Groups	This list box displays the names of all groups to which the particular user belongs.
Home	The directory within your Apple Network Server's file system in which the user's private files reside. The Home path is user-selected by clicking on the “Select...” button and navigating to the desired location.
User ID	A numeric ID by which the user is known by your Apple Network Server; this number must be unique within the <code>/etc/passwd</code> file.
Shell	The pathname of an executable file that is started when the user logs in; the default is <code>/bin/false</code> , preventing a user from logging in at a UNIX terminal but this may be set to an alternate shell tool. This does not affect logging on to a CanOPI server.
Default	This group is the user's default group. You can change a user's default group by dragging and dropping another group to this field from “Users and Groups” window.
Plan	Enter text here to be displayed when the UNIX command “finger” is performed on a user.

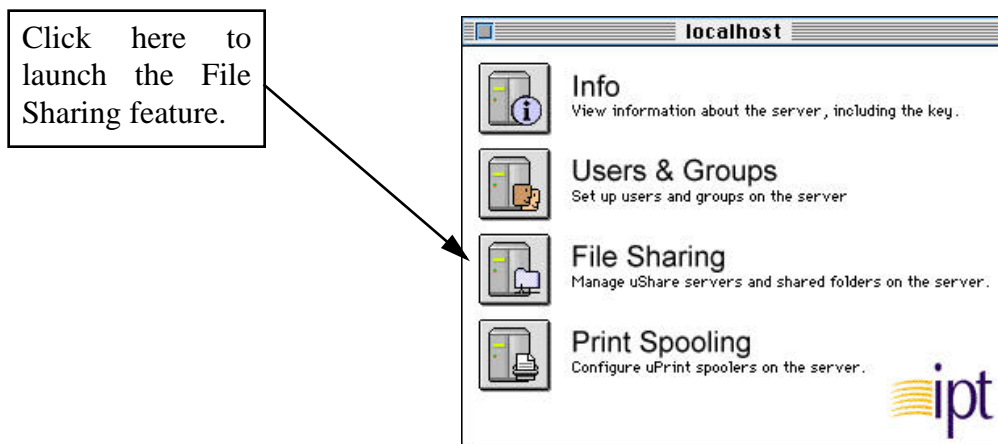
File Sharing

Creating & Editing uShare Servers and Shared Folders

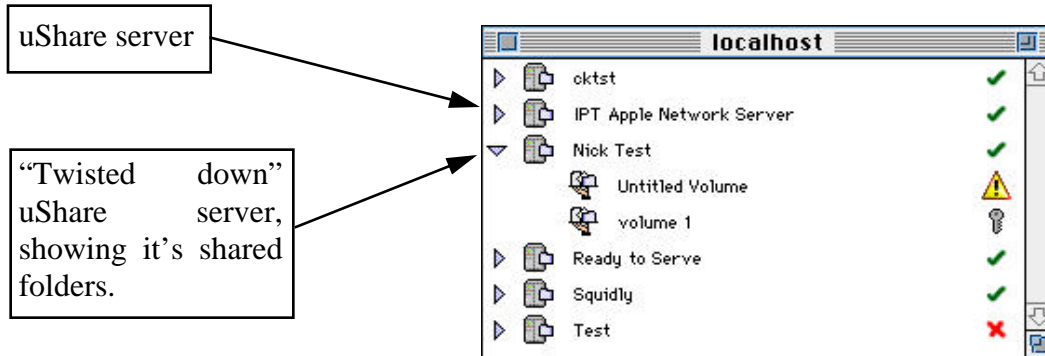
NOTE *If you are creating or modifying uShare Servers, you must restart CanOPI's AFP process for the changes to take effect (EasyAdmin will automatically prompt you to do this when applicable). It is recommended that you complete all configuration changes with EasyAdmin at one time, then restart CanOPI after all of your changes have been made.*

CanOPI's File Sharing feature lets you publish portions of your Apple Network Server's file system as AppleShare volumes. EasyAdmin's File Sharing feature lets you create, edit, and remove CanOPI uShare servers and their folders. You may create your own uShare server to publish your CanOPI volumes, or use the default server "CanOPI_<hostname>". The default server may be configured to fit in your individual network.

Launch the File Sharing feature by clicking the EasyAdmin window's "File Sharing" button.



Log on to the “IPT EasyAdmin server” as an administrative user (if you have created these accounts), otherwise as “root”. The “File Sharing” hierarchical list window appears displaying the names of Can-OPI’s file servers.



Notice that the “File Sharing” hierarchical list window displays the name of your Apple Network Server in the title bar.

“Twist down” triangle next to a file server to display a list of all shared folders that the uShare server contains.

To the right of each uShare server appears a small icon:

- ✓ This icon indicates that the uShare server is published as an AppleShare volume in the MacOS Chooser.
- ✗ This icon indicates that the file server is not published as an AppleShare volume

To the right of each shared folder are additional icons that may appear:

- 🔑 This “key” icon indicates that the shared folder, or a folder that it contains, has an access restriction, and therefore is not accessible to all users. If no icon appears, there are no restrictions on the shared folder, and anyone can log on. Refer to “Creating or Editing a Shared Folder” on page **EasyAdmin-40**.



This “warning” icon indicates that the AIX path to the shared folder, or a folder that it contains, either has not yet been defined or no longer exists. This icon always appears in the case of a newly-created shared folder (until it’s path has been defined). In the case of an existing shared folder, it may have been deleted or altered by someone on the Apple Network Server, or the drive where it resides is temporarily unavailable.

Creating or Editing a uShare Server

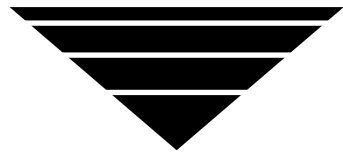
NOTE *The following example is for editing an existing uShare server with EasyAdmin. In the case of a new installation, the server you should edit is CanOPI_<hostname>. You may change the attributes of this server to meet your network demands.*

Any server that you create must not contain the characters “:” or “@”. EasyAdmin will cause your MacOS machine to “beep” if an illegal character is typed in.

To edit an existing uShare server, double-click on it in the “File Sharing” hierarchical list window. EasyAdmin will display that uShare server’s “Options” window:

CanOPI QuickTIP

If you are configuring your uShare server to work in conjunction with products like Group-wise, ccMail, EPOCH file migration, or any product that handles files on both the UNIX and MacOS sides, read the Chapter entitled “Compatibilities” in the Technical Guide before proceeding with your configuration.



Enter the appropriate value in each field (for a complete description of each field value, see the table “uShare Server Attributes” on page **EasyAdmin-39**).

1. **Password Exchange** - Choose among three options for password exchange between MacOS clients and the Apple Network Server (Clear Text, 1-Way Encryption, and 2-Way Encryption).
2. **Allow users to change password** - Checking this box allows users to change their own passwords.
3. **Automount without password** - Checking this box allows the user to have their MacOS machine mount a shared folder from this uShare server at startup without requiring them to type in the password.
4. **Export home folders** - Checking this box allows the user to mount their “Home folder” (using the Chooser) as an icon on their desktop.
5. **Allow guest access** - Checking this box allows a user logged in as “guest” to access this uShare server.
6. **Maximum number of connected users** - This field determines how many users may login to the server at one time. The default is 64. You may change it to meet the needs of your clients.

Close the window to save your changes.

Now that you have defined your uShare server, you may create the shared folders that it will publish to your MacOS users. See the section “Creating or Editing a Shared Folder” on page **EasyAdmin-40**.

Deleting a uShare Server

1. Select the server in the “File Sharing” hierarchical list window that you want to delete.
2. Drag and drop it to the “Trash”.

uShare Server Attributes

Attribute	Description
Password Exchange	<p>Choose among the following options from the drop down list:</p> <p>Clear Text - Choosing this option does not encrypt passwords as they are transmitted over the network.</p> <p>1-Way Encryption - This option provides a higher level of password protection as they are transmitted over the network than “Clear Text”.</p> <p>2-Way Encryption - This option provides a higher level of password protection as they are transmitted over the network than “1-Way Encryption”.</p>
Allow users to change passwords	Checking this box allows users to change their own passwords.
Automount without password	Checking this box allows the user to have their MacOS machine mount a shared folder from this uShare server at startup without requiring them to type in the password.
Export home folders	Checking this box allows the user to mount their “Home folder” (using the Chooser) as an icon on their desktop.
Allow guest access	Checking this box allows a user logged in as “guest” to access this uShare server.
Maximum number of connected users	The maximum number of MacOS users that can simultaneously login to the server; default = 64. It must be set to no more than 128 (as defined by AppleTalk protocol—theoretical limit is ≤ 253 sockets/machine); your CanOPI authorization key may restrict usage to a smaller number of users.

Creating or Editing a Shared Folder


NOTE *The following example is for creating a new shared folder with EasyAdmin. Editing an existing folder involves identical field definitions. To edit an existing folder, double-click on it in the “File Sharing” hierarchical list window. Use the steps below as a key to the field definitions.*

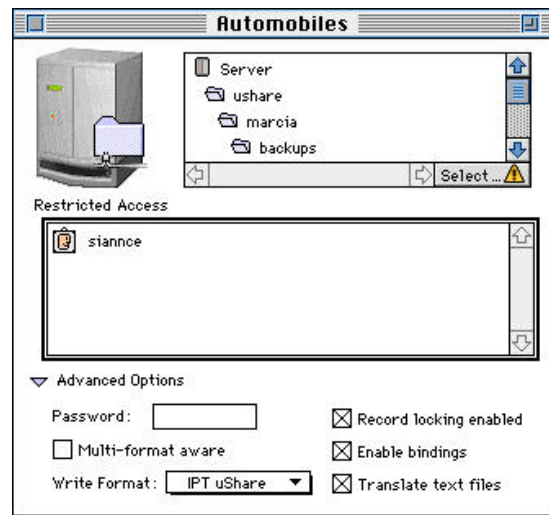
1. To create a new shared folder, first select the uShare server to which you want to add a shared folder from the File Sharing hierarchical list window.
2. Choose “New Shared Folder” from the “File” menu. EasyAdmin adds a new shared folder to the selected uShare server with a default name of “Untitled Shared Folder”. You can change the name of this new shared folder by typing in the desired text.

IMPORTANT!

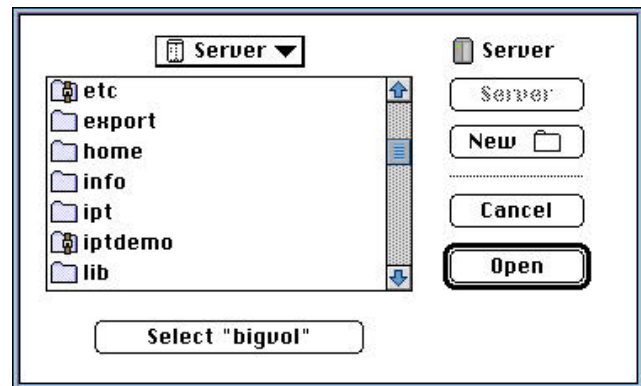
Do not publish a folder as a uShare volume on your desktop if it is contained within an already published volume. For example, by defining a folder for each of the following AIX paths, you would be defining a volume within a volume:

```
/home/docs  
/home/docs/Word_docs
```

3. Because the new shared folder needs to have its location (path) defined, you will see the yellow “warning” icon () to its right. Define its path by double-clicking in it (or select it and choose the “Open Shared Folder” option from the “File” menu) to display its “Options” box (see the “Shared Folder Attributes” table on the page **EasyAdmin-44** for a complete description of each option).



4. Click on the “Select...” button in the bottom right corner of the hierarchical list window to display the Select Shared Folder path browser window.



5. Navigate to the location where you want your new Shared Folder to reside and click the “Select <folder>” button (where “folder” is

the name of the folder where your new folder will reside). You will return to the Shared Folder Options window.

The following shared folder options are available for modification:

These options may generally be left with the default settings intact.

1. **Shared Folder Location** - This hierarchical list window displays the AIX path location of your shared folder. Click on the "Select..." button to open a browser window from which you can change the shared folder's location.
2. **Restricted Access** - This list window shows the users and groups that have access to this particular shared folder, in alphabetical order. Place users and groups into this list window by dragging and dropping them there.

Click on the "Advanced Options" triangle to display the following additional options:

3. **Password** - Enter the (optional) password required to access the selected shared folder.
4. **Multi-format aware** - Allows the particular shared folder to recognize all three file formats listed in the "Write Format" box, below.
5. **Write Format** - Choose between three file format write options here (AppleSingle, AppleDouble, and IPT uShare).
6. **Record Locking Enabled** - Allows CanOPI to pass MacOS record locking calls to the Apple Network Server.
7. **Enable Bindings** - Enables CanOPI's Binder program to determine a file's type and creator.
8. **Translate text files** - Enables automatic translation of text files between MacOS and AIX systems.

Save your changes to the shared folder by closing the window.

NOTE Several CanOPI folders are protected, and therefore cannot be shared, by default. These folders appear in the browser window with a "belt" around them, and the "Select..." button is dimmed out when

you view their “Shared Folders Options” window. These files are protected because they contain settings or information that, if changed, could affect the performance of CanOPI. It is possible to change the “protected” status of these folders by modifying the `iptadminrc` file in the `ushare/EasyAdmin` folder on your Apple Network Server. See the “EasyAdmin Configuration” chapter of the Technical Guide for more detail.

f

Shared Folder Attributes

Attribute	Description
Shared Folder Location	The AIX path of the folder you want to publish as an AppleShare shared folder.
Restricted Access	Lists users and groups that have access to the selected shared folder. If this list window is blank, then no access restrictions apply. Users and group can be placed in this list window by dragging and dropping them there.
Password	Enter the password that a user must enter to gain access to a particular shared folder.
Multi-format aware	Placing a check mark in this box enables the particular shared folder to recognize all three file formats listed in the “Write Format” box, below. Checking this box can slow down system performance. The default is “checked”.
Write Format	Choose between three options in this drop down list: AppleSingle - Choosing this option causes the shared folder file format for writing set to “AppleSingle” format. AppleDouble - Choosing this option causes the shared folder file format for writing set to “AppleDouble” format. IPT uShare - Choosing this option causes the shared folder file format for writing set to “IPT uShare” format. This is the fastest of the three options.
Record locking enabled	Disabling this attribute prevents CanOPI from passing MacOS record-locking calls to the UNIX system and is helpful when file systems do not support record locking or when record locking is buggy (e.g., some versions of NFS), or in the event you are using ccMail in conjunction with a CanOPI volume (see the “Compatibility” section of the Technical Guide). The default is “checked”.
Enable bindings	Setting this attribute enables CanOPI’s Binder program that reads the first 64 bytes and the file names of untyped files to determine their AFP Finder information (type and creator). The default is “checked”.

Shared Folder Attributes

Attribute	Description
Translate text files	MacOS text files have Carriage Return characters at line ends, while UNIX text files have Line Feed characters at line ends. Setting this attribute enables automatic translation of these characters when a text file is written to or read from the volume. The default is “checked”.

NOTE *In addition to the options above, there are several advanced options not accessible with EasyAdmin. This includes the ability to have CanOPI mark open files as “busy”. Also, it is possible to prevent CanOPI from counting the offspring of sub-directories (for increased performance on file systems with very large directory trees). For a full description of these options, see the topic “Advanced Configuration” in the AFP section of the Technical Guide.*

Deleting a Shared Folder

1. Select shared folder you want to delete from the “File Sharing” hierarchical list window.
2. Drag and drop the folder to the “Trash”.

NOTE *Deleting a shared folder has no effect on the directories or files residing within that folder. Only the folder definition is deleted, not the contents of the folder.*

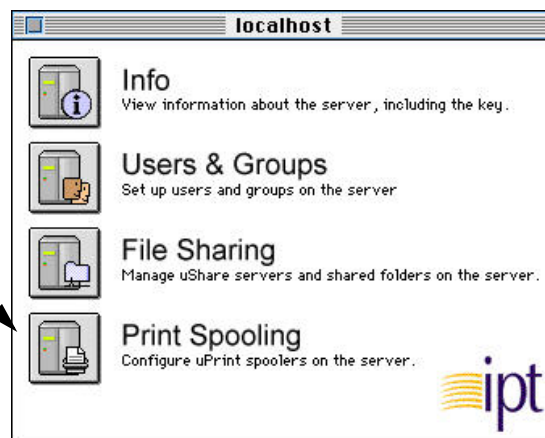
Print Spooling

Creating & Editing CanOPI Print Spoolers

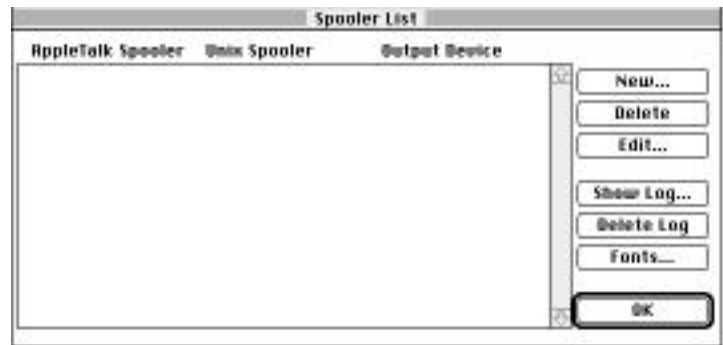
NOTE *If you are creating or modifying Print Spoolers it is not necessary to restart CanOPI's Spooler process for the changes to take effect as this will be done automatically.*

CanOPI's Print Spooler service lets MacOS and AIX users share Post-Script printers on your AppleTalk and AIX networks. The Print Spooler Manager lets you create, modify, and remove print spoolers. Launch the Print Spooler Manager by clicking the EasyAdmin's "Print Spooling" button.

Click here to launch
the Print Spooling
Manager



The "Spooler Manager" appears and the names of existing print spoolers are displayed in the Spooler List:



Creating a Print Spooler

NOTE The following example is for defining a new print spooler with EasyAdmin. Editing an existing spooler involves identical field definitions. To edit an existing spooler definition, select a spooler from the provided list by clicking on the name, and click on the “Edit” button in the “Spooler List” window. Use the steps below as a key to the field definitions.

1. Click the “New...” button. The “Edit Spooler” window appears:

2. Define or modify the print spooler’s attributes as described below:

Defining Spooler Options

You create and modify print spoolers by defining spooler options in the “Edit Spooler” window:

For each spooler you can define three elements:

- **AppleTalk Spooler** - This element defines the name that appears in the Chooser to your MacOS users. You may not use spaces, or the characters “:” or “@”, in this field.
- **UNIX Spooler** - This element defines the UNIX print spooler. It is used both as an actual UNIX spooler when printing from a UNIX command line, as well as a spool directory when printing from a MacOS to a CanOPI spooler that connects to an AppleTalk device (read on for further details).
- **Output Device** - This element defines the destination device being printed to. It may be set to an AppleTalk printer, UNIX printer, or if you prefer, a directory (see the following for more information).

AppleTalk Spooler Options

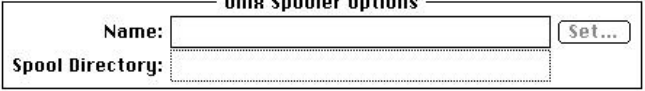
To define a spooler that appears in the MacOS Chooser, you must make entries in the Edit Spooler window’s “AppleTalk Spooler Options” portion:

AppleTalk Spooler Options	
Chooser Name:	<input type="text"/>

- **Chooser Name** - the user defined name registered through NBP that appears in the MacOS Chooser. *Do not use spaces, or the characters “:” or “@”, in this field*

UNIX Spooler Options

To define a spooler that is available to UNIX users, you must make entries in the Edit Spooler window’s “UNIX Spooler Options” portion:

A dialog box titled "Unix Spooler Options". It contains two text input fields. The first is labeled "Name:" and has a "Set..." button to its right. The second is labeled "Spool Directory:". Both fields have dotted borders, indicating they are editable.

NOTE *The most common scenario that involves a UNIX print spooler is one where an AppleTalk to UNIX to AppleTalk spooler is created. With this type of spooler, a print job originates from a MacOS, and is printed on an AppleTalk device, but is spooled to your Apple Network Server first. This has an advantage over printing directly to an AppleTalk device because it minimizes the amount of time your MacOS computers spend printing. Using this type of spooler also provides administrative control of printing from the UNIX side. In addition, by using CanOPI's PrintQManager (enabled as a separate service), users have the ability to control their own print jobs. With PrintQManager, "root" may operate from the MacOS side as well, and manage print services. For more information, see the section "PrintQManager".*

The editable field in this portion is:

- **Name** - the name entered in your Apple Network Server's printer list. When creating an *AppleTalk to UNIX* spooler (printing from a MacOS to your Apple Network Server), click the "Set..." button to open a list of your Apple Network Server's printers. The following dialog will appear, you may select a printer from the list:

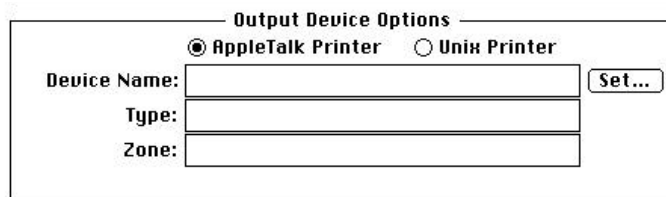


With an *AppleTalk to UNIX to AppleTalk* spooler, the name that you assign the UNIX portion of your spooler is relatively arbitrary. However, for consistency, it is a good idea to use a conven-

tion where you can easily associate this UNIX spooler with its AppleTalk counterpart (e.g.: if your AppleTalk spooler is called “LW_CanOPi”, then a good name for the UNIX spooler would also be “lw_canopi”). The UNIX printer name should be different for each *AppleTalk to UNIX to AppleTalk* spooler.

Output Device Options

To define a spooler’s output device, you must make appropriate entries in the Edit Spooler window’s “Output Device Options” portion:



Output Device Options

☒ AppleTalk Printer ☐ Unix Printer

Device Name:

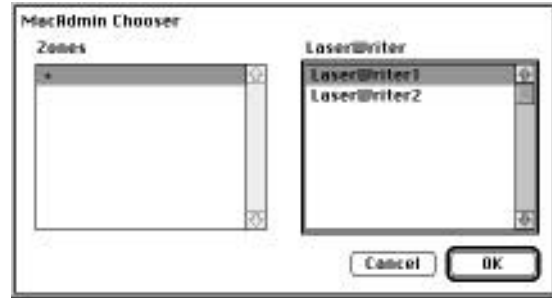
Type:

Zone:

The editable fields in this portion are:

- **AppleTalk/UNIX Printer buttons**- click the appropriate button to specify if the printer is a UNIX device or an AppleTalk device. If the Output Device is a UNIX device, no other entries are necessary in this box. *If pr2file gets specified in the “More Options” window, the Device Name will appear as **pr2file** (see “More Options” on **EasyAdmin-53** for more information)*

- **Name** - If the output device is an AppleTalk printer, click the field's corresponding "Set..." button to select the name and zone of the AppleTalk printer, a menu will appear:



Select an appropriate zone and LaserWriter for the spooler, and click the "OK" button. The "Type" and "Zone" fields will be filled automatically.

- **Type** - If the output device is an AppleTalk printer, this field specifies the entity type of the destination printer (this field should always be set to type "LaserWriter" unless you are sure that your destination device uses PAP, and publishes itself as something other than type "LaserWriter");
- **Zone** - This is the Zone that the AppleTalk output device exists in. If the output device is an AppleTalk printer, the printer's zone is automatically entered in this field when you click the "Name" field's "Set..." button.

More Options

By clicking this button, the following "More Options" menu appears:

AppleTalk Spooler Options

☒ PostScript ☐ NeWSPrint

Type:

Zone:

Fonts
☐ Include
☐ Extract

Unix Spooler Options

Print Program:

☒ Use PS Header:

☐ Enable Printer Accounting


Job Space Options

Max Jobs:	<input type="text" value="30"/>	Min Free:	<input type="text" value="100"/>	MB
Max Entries:	<input type="text" value="30"/>	Max Space:	<input type="text" value="100"/>	MB

These options generally do not need to be set, but are sometimes useful when customizing the features of your print spooler. For a complete description of the values of each field, see the "More Options..." table on the following page.

Click the "OK" button. To cancel changes to the "More Options" window, click the "Cancel" button.

More Options...

Parameter	Description
PostScript/ NeWSPrint	This value is always set to PostScript (the NeWSPrint value is disabled)
Type	This is the device type that is published with Apple's Name Binding Protocol. The default is "LaserWriter". This setting should not change unless you are sure that you want your CanOPI spooler to appear with a type other than "LaserWriter" in the Chooser.
Zone	<i>This value is only effective when using Phase I Network Protocol.</i> It may be set to determine which zone users must be in to access the AppleTalk spooler.
Fonts	<p>Include: This box enables CanOPI's ability to insert pre-cached fonts into a document if they are not permanently downloaded to the output device already. This saves time by eliminating the need for the MacOS client to download the font description with the print job once the font has been cached. The default is "unchecked".</p> <p>Extract: This box enables CanOPI's ability to extract, or "learn" about fonts that the output device doesn't already have permanently downloaded. When a print job is sent to the spooler, CanOPI determines which fonts need to be downloaded from the MacOS to the printer, and caches this information. By doing this, subsequent print jobs using the same fonts will print without having to download the same font information from the MacOS client again. The default is "unchecked".</p>
Print Program	<p>This is the program that "sends" the job to the print device, or as an option, to a file. The default print program is called lwdq, and is responsible for delivering a print job to an AppleTalk printer.</p> <p>If you prefer that the print job be passed to a UNIX directory instead, hold down the mouse button on the Print Program box, and select "pr2file". This will bring up box requesting additional information:</p> 

More Options...

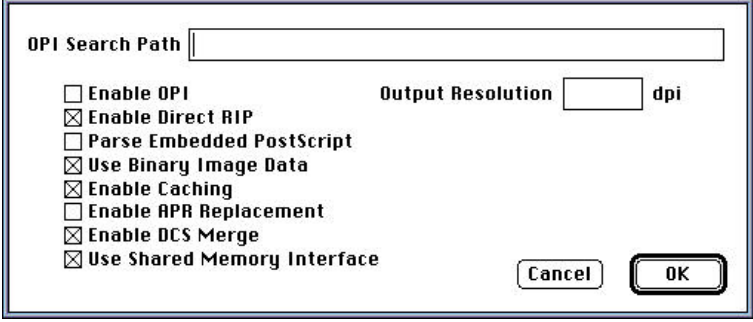
Parameter	Description
Print Program (continued)	<p>Enter the UNIX directory path you wish to set as the destination for the print jobs. This is especially handy when printing to a UNIX software RIP that monitors a directory for the presence of print jobs and picks them up to be processed on the fly.</p> <p>You can specify a directory path by entering the following: <code>/directory1/directory2/</code> This will create a file with the Job Title, User Name and Process ID of the print job in the above directory path. This can be changed by actually specifying the name of the target file in the same field. For example: <code>/directory1/directory2/\${tt}_\${uu}\$\$</code> where (<code>\${tt}</code>) = job title, (<code>\${uu}</code>) = user name, (<code>\$\$</code>) = process ID). You could replace the string <code>\${tt}</code> with a filename of your choice, in the understanding that all files printed through this spooler will have the same name. The following: <code><desiredstring>_\$\$</code> where <code><desiredstring></code> is the string of text that you wish to name the resulting print jobs will ensure that each file is given a different name as the <code>_\$\$</code> will assign the UNIX process id associated with the print job.</p> <p><i>IMPORTANT - The "Print file name" entry cannot contain spaces.</i></p>
Use PS Header	<p>This field is used to define a PostScript file that is to be prepended to each print job as it passes through the spooler. This is helpful when you need to pass specific printer options via postscript, to the printing device. To edit the PostScript header file, click the "Edit" button. Click "OK" to save your changes, "Cancel" to ignore them.</p>
Enable Printer Accounting	<p>"Checking" this box enables the Printer Accounting function. Check this box to store all print events for each spooler in a log that can be viewed by the user. To view a spooler's log click the 'Show Log...' button in the 'Spooler List' dialog box. The default is "unchecked".</p>

More Options...

Parameter	Description
Max Jobs	This entry determines how many finished print jobs will be held in the spoolers .finished queue, so that they may be re-submitted by the PrintQManager application. When the number of finished print jobs matches the value for this field, subsequent finished jobs will “push” the oldest saved job out of the .finished queue (see the section “PrintQ-Manager” for more details). The default value is “30”.
Max Entries	This determines how many completed print jobs will be held in the list of finished jobs, as reported by PrintQManager. When used in conjunction with the Max Jobs entry, it is a convenient way to keep track of many finished jobs, while only actually saving the most recent jobs for re-submission. The default value is “30”.
Min Free	Specifies the minimum available disk space required for activation of the .finished queue, in megabytes (to be used in conjunction with the PrintQManager). The default value is “100”.
Max Space	Specifies the maximum disk space consumed by the .finished queue in megabytes (To be used in conjunction with the PrintQManager). The default value is “100”.

OPI Options

This button is used to define OPI options for a spooler using the CanOPI OPI engine. To configure your print spooler to process OPI print jobs, click on the “OPI Options...” button:



The OPI Options dialog box contains the following elements:

- OPI Search Path**: A text input field.
- Enable OPI**: ☐
- Enable Direct RIP**: ☒
- Parse Embedded PostScript**: ☐
- Use Binary Image Data**: ☒
- Enable Caching**: ☒
- Enable APR Replacement**: ☐
- Enable DCS Merge**: ☒
- Use Shared Memory Interface**: ☒
- Output Resolution**: A text input field followed by the unit **dpi**.
- Buttons**: **Cancel** and **OK**.

Use the table “OPI Options” on the following page to determine which options should be defined to enable OPI processing. Click “OK” when finished, “Cancel” to ignore changes.

OPI Options

Option	Description
OPI Search Path	Used to define alternate search directories for docman to use when locating replacement images during the OPI substitution process. Multiple search directories may be specified, each separated by a semicolon ';'.
Enable OPI	This box must be checked for CanOPI's image replacement to take place.
Enable Direct RIP	Check this option to allow color separated jobs to start printing faster by using docpipe . docpipe allows the job to begin printing to the output device before spooling is complete. Leave this box unchecked to disable this feature.
Parse Embedded PostScript	This option should be used to support LowRes within LowRes images. That is, if you are spooling a document containing a LowRes image, that is in fact the LowRes stub of another OPI file (one that has more LowRes images imbedded within itself), this option forces CanOPI to search for the embedded PostScript image path comments so that all HiRes images will be properly replaced.
Use Binary Image Data	Checking this box enables binary representation of image data. This option should be used unless your printer cannot handle binary data.
Enable Caching	Checking this box enables docman's internal caching feature. This feature provides for faster OPI processing and should only be removed for debugging purposes.
Enable APR Replacement	This option will force docman to search for LowRes files with the '.e' extension, generated by the PSImage utility, and substitute the relative PSImage HiRes.
Enable DCS Merge	This allows for DCS HiRes images to be output at full resolution when printed with composite data.
Use Shared Memory Interface	The shared memory interface allows for output from the OPI function to be passed through RAM buffers to the target output device, as opposed to building the OPI'd file on disk. It greatly improves the output performance of OPI and is recommended for use to all AppleTalk devices. This option has no effect on output to UNIX printers or Print2file spoolers.

Option	Description
Output Resolution	This field may be used to specify the output resolution of the spooler for faster printing. By setting the Output Resolution, you may speed the printing of HiRes images when the printer is limited to output at a lower resolution than that of the image. For example, by setting a value of 150 , CanOPI will only generate and deliver a 150dpi description of images when printing, even if the images themselves are saved at higher resolution. It is not required to set this if printing to a High Resolution output device such as a PostScript RIP to an image setter.

NOTE For a complete list of OPI options, including those not accessible through EasyAdmin, see “Parameters in the `usps_options` file” in the Spooler section of the Technical Guide.

Deleting a Print Spooler

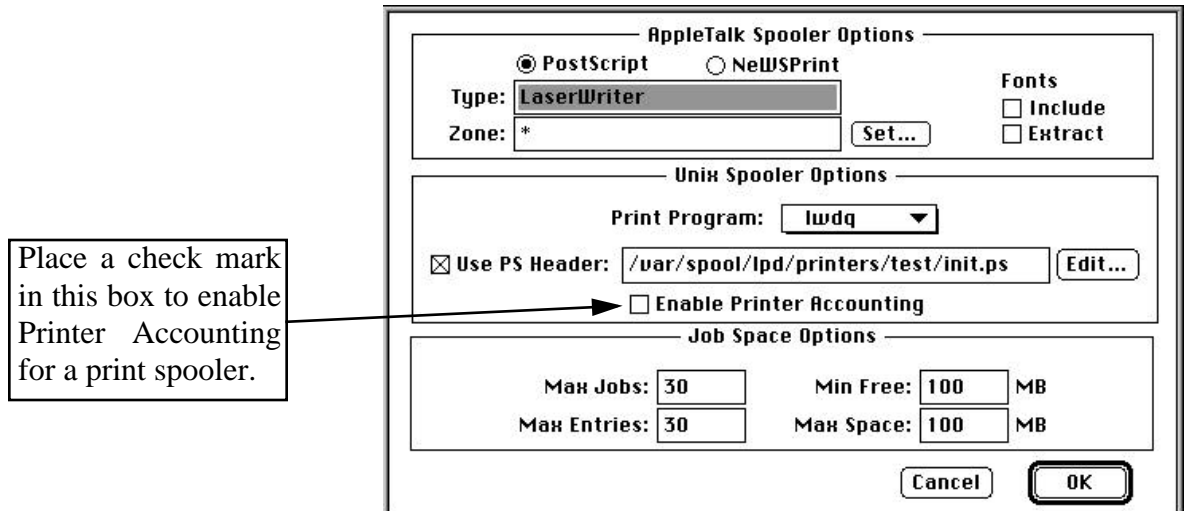
To delete a print spooler, select an entry in the Spoolers list and click the “Delete” button.

NOTE To delete a spooler that has both AppleTalk and UNIX spooler options, and whose output device is an AppleTalk printer, you must separately delete the AppleTalk and UNIX spoolers.

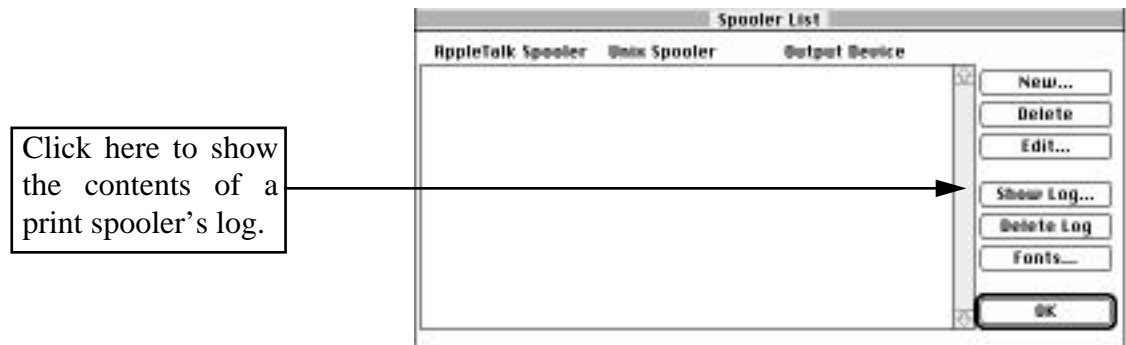
Printer Accounting

EasyAdmin contains a Printer Accounting feature that allows the user to access a log of all print activities for each print spooler. Printer Accounting displays information such as the name and login of the user that initiated the print job; the spooler name; the document title; and when the print job was queued, spooled, and finished. The Printer Accounting log will also tell you if you have not purchased an authorization key. This information is viewed using a user-selected text editor application such as Apple SimpleText or Microsoft Word.

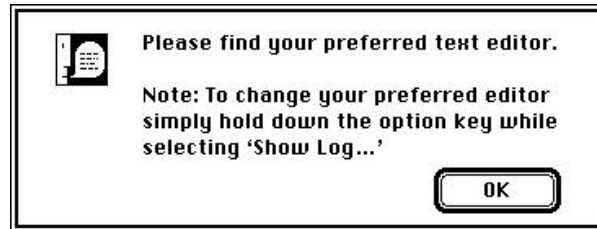
To create a print log for a print spooler you must place a check mark in the “Enable Printer Accounting” check box in the “More Options” window.



You can then view the contents of a print spooler’s log by selecting that spooler and clicking on the “Show Log...” button in the “Spooler List” dialog box.



EasyAdmin will ask you to find a text editor for viewing the file:



Click on the "OK" button and browse your system to find a desired application such as Apple SimpleText. Click "OK" in the browser dialog box when you are satisfied, and a Printer Accounting log for the specified spooler is displayed:



You can export this log information into a spreadsheet or database application, and it will automatically create cells for each field. Use the Cut, Copy and Paste Edit Functions to do this:



Drag & Drop and OPI

CanOPI's **Drag & Drop** capability allows users to move their high-resolution images to a network file server and have low-resolution OPI images automatically generated for use in page-layout and printing. This chapter discusses the steps involved in configuring a **Drag & Drop** folder, and discusses how to use **Drag & Drop**.

Configuring & Using Drag & Drop

Configuring CanOPI Folders for Drag & Drop

Once you have configured your CanOPI server to publish a volume, you may specify certain folders within that will perform CanOPI's **Drag & Drop** LowRes image generation for use with OPI. This requires the creation of a text file called **opiconfig** in the folder you wish to use for **Drag & Drop**. This file defines how CanOPI will create LowRes images. To configure a folder:

1. Use the Mac OS Chooser to login to your CanOPI file server.
2. Select the volume "MacApps" to mount on the Desktop.
3. Repeat step 2 to mount a volume you wish to use for Drag & Drop (multiple volumes may be configured).
4. In the MacApps volume, you will find a file called **opiconfig**. Drag a copy of this file to a folder within the CanOPI volume for which you wish to activate **Drag & Drop**.
5. This will be enough to activate low-resolution image generation for the entire volume. LowRes generation will occur for images copied in to any folder *below* this point. It is possible to copy an **opiconfig** file into a folder, then anything copied into this folder, or any subsequent folder, will generate LowRes, allowing multiple format LowRes files to be generated on a single volume. You can edit the **opiconfig** file you copied in step 4 to change the format and position of the LowRes. It is also acceptable to create a new file called **opiconfig** if you prefer, provided you follow the syntax of the example file. Use the "TeachText" or "SimpleText" tool provided with your MacOS to edit this file. The table "opiconfig Attributes" on the following pages may be used to determine which attributes to set for this folder. Be sure to avoid adding extra spaces or characters to your entries. Comments excluded, (lines that beginning with #), your **opiconfig** file may look similar to:

```
opi=true  
hres=72  
vres=72  
pict=true
```
6. Save the file and repeat steps 3 through 5 as necessary.

opiconfig Attributes

Attribute	Description
opi=(true false)	If true , enables low res image generation (drag and drop OPI). If false then LowRes image generation is disabled. The default is true .
pict=(true false)	If true , opistub creates a PICT preview in the resource fork of the LowRes image file. When using all default opiconfig settings, this is the image viewed within the page layout application. If false , then no PICT preview is generated. Setting this to false is not recommended unless either the 'tiff' option has been set to true , or a viewable preview of the LowRes image is not desired. The default is true .
print=(false true)	This option only applies for EPS LowRes images (eps=true). If true , then opistub creates a printable preview image. If false (or if eps=false), then no printable preview is generated. This option is used to support proof printing of EPS formatted LowRes images, when such an option is not available from the page layout application. Enabling this option causes the LowRes image files to take up more disk space. The default is false .
printseps=(true false)	This option only applies for DCS images with printable LowRes (e.g. print=true) and single file LowRes disabled (e.g. singlestub=false). If true , then opistub will create a printable preview for the master file and each color plate. Then it is possible to print the LowRes as composite or separated. If false , then opistub will only create a printable preview for the master file (not the color plates). Then it is only possible to print the LowRes as composite. The default is true .
vres=<num>	The value <num> defines the vertical resolution of LowRes images in dots per inch. The default is 72 .
hres=<num>	The value <num> defines the vertical resolution of HiRes images in dots per inch. The default is 72 .
printablehres=<resolution> printablevres=<resolution> tiffhres=<resolution> tiffvres=<resolution> pichres=<resolution> pictvres=<resolution>	The above options provide a mechanism to set the printable, tiff and pict resolutions independently. If any of the above resolutions are not present, the default is set to hres and vres as defined above. The default for all of these options is unset, so the hres and vres values are used for all images.

opiconfig Attributes

Attribute	Description
lores=hires	If lores=hires is enabled, opistub will use the format of the HiRes image to determine the LowRes image format. Specifically, if the HiRes image format is EPS, then the LowRes image format will be EPS, otherwise, the image format will default to a TIFF LowRes image. It should also be noted that the 'tiff' option (described below) still affects EPS HiRes images (a setting of tiff=true will still cause a TIFF preview to be included within the data fork of the EPS image). The default for this setting is enabled. To disable place a # character in front of the option.
usephotodata=(true false)	If true , then LowRes generated from Adobe PhotoShop EPS and DCS images will use the data from the EPS/DCS (instead of using the PICT resource). If false , then the LowRes image is generated from the PICT resource as is always done for all other EPS and DCS files. Setting this option to true makes it possible to have LowRes images at > 72DPI (not possible when set to false) as well as supporting clipping paths in the printable preview of the LowRes image (not possible when set to false). The default is true .
eps=(true false)	NOTE: This option has no effect if the lores=hires option is set. If true , then opistub uses an EPS file format for all LowRes image generation (unless lores=hires is set). If eps=false and tiff=false option is also FALSE then the EPS file format is used for LowRes images. If both eps=true and tiff=true then, still using an EPS file format, a TIFF preview image is added. This configuration is suggested when support is required for both Macintosh and PC clients. The default is true .
tiff=(false true)	NOTE: Enabling this option in conjunction with eps=false will cause incompatibilities for some image formats and is not recommended. In particular, LowRes stubs generated from EPS or DCS HiRes formats have many limitations. This option only remains for backwards compatibility, and for use with eps=true , which provides PC compatible LowRes images. If true , opistub creates a TIFF preview in the data fork of the file. If false , then no TIFF image is created. The default is false .

opiconfig Attributes

Attribute	Description
singlestub=(true false)	If true then a single file DCS LowRes image will be created from DCS HiRes images. If false then a five file DCS LowRes image will be created. The default is true .
keepprsrc=(false true)	If true , then the resource fork of the HiRes image is preserved (copied) in the LowRes image (excluding desktop information like date, file size, icon location, etc.). This is useful if the resource fork of the HiRes image contains information necessary for a specific application. If false , then the resource fork of the HiRes image is not preserved. The default is false .
creator=<string>	If defined to hires then the creator will be preserved from the HiRes image, otherwise this string defines which creator to assign to the LowRes image (for example: creator=8BIM for Adobe PhotoShop OR creator=ART5 for Adobe Illustrator). The default is hires .
usetiffpict=(false true)	This option only affects TIFF HiRes images. If true , then opistub will attempt to use the PICT image(s) in the resource fork of the HiRes TIFF file for LowRes image generation. If false , opistub will NOT attempt to use the PICT data, but instead will always generate a LowRes image from the HiRes TIFF data. Setting this option to true is not recommended, as some applications create PICT resource images that have different dimensions (e.g. a thumbnail) than the actual HiRes image data. The default is false .
printgray=(false true)	This option only applies for EPS LowRes images with printable previews (e.g. ' eps=true AND print=true '). If true , then a grayscale preview will be included in the LowRes image. If false , then no grayscale image is generated. This option is useful when printing LowRes images to a non-color level 1 PostScript output device. The default is false .

opiconfig Attributes

Attribute	Description
binary=(false true)	This option only applies for EPS LowRes images with printable previews (e.g. eps=true AND print=true). If true , then opistub will use a binary representation of printable preview image data. If false , then ASCII (hex) is used to represent the image data. Although using binary data results in smaller sized LowRes images, it causes problems with devices (such as some printers) that do not support binary data. The default is false .
pathname=<path>	Specifies the pathname of the LowRes directory. This path can be a relative or absolute pathname (see also the 'pathtype' and 'pathformat' options). The default for this option is LowRes .
pathtype= (relative absolute mirror)	Specifies the type of path specified in the 'pathname' option (above). This option may be set to one of: relative Specifies that the LowRes should be built in the location pathname relative to the pathname of the HiRes image. absolute Specifies that the LowRes should be built in the absolute location pathname (relative to '/') regardless of the pathname of the HiRes image. This results in all LowRes images being placed in a single directory. mirror Specifies that the LowRes should be built in the absolute location pathname , AND appends the relative pathname of the HiRes image. This results in a duplicated directory structure where the LowRes structure starts at the location 'pathname'. The default is relative .
pathformat=(mac unix)	This value specifies the format of the path specified in the pathname option (above). This option may be set to either mac or unix . If a mac path format is specified, the Macintosh volume portion of the pathname must exist in the global volumes description file (the default location of this file is /ushare/etc/afp.dirs). The default is unix .
prefix=<string>	Specifies the string to prepend to the name of the HiRes image name to generate the LowRes image name. The default is an empty prefix (none).

opiconfig Attributes

Attribute	Description
suffix=<string>	Specifies the string to append to the name of the HiRes image name to generate the LowRes image name. The default is an empty suffix (none).
loresfromlores=(false true)	If true , then a second LowRes image may be generated from the first LowRes image (by simply copying the LowRes to another volume). If false , then a second LowRes image may not generated. The default is false .
keepimagepathcmnts=(true false)	If true , then the path names of both the original HiRes image and the first LowRes image are stored in the second LowRes image. This makes it possible to obtain HiRes output from both LowRes images. If false , then only the pathname to the first LowRes will be stored in the second LowRes image. Note that this option is only relevant when loresfrom-lores is set to true . The default is true .

Using Drag & Drop

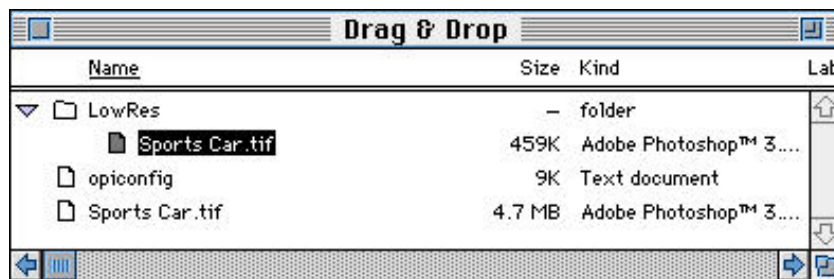
After this target folder has been set up, users can drag image files to this folder, whereupon low-resolution images are automatically created.

NOTE *In the case of DCS files (which include four color separations and a composite), all five files must be dragged into the target folder for LowRes generation to take place.)*

Low resolution file generation is a fully automated task so if a high resolution file within the target folder is duplicated, renamed or modified and resaved a new LowRes file will be created. If the HiRes file is deleted (dragged to the Trash), the LowRes file will automatically be deleted as well.

You may also drag an entire folder of images into a **Drag & Drop** folder. CanOPI will create the LowRes folder, containing the LowRes images, within the folder that contains the original HiRes images, depending on the option **pathtype**.

Drag & Drop In Action



In this picture, a 3,868K HiRes TIFF file was dragged to the **Drag & Drop** folder, whereupon a 208K LowRes TIFF FPO image was

automatically generated and placed in the **LowRes** folder. This file should be used in the page layout application instead of the HiRes TIFF.

CanOPI's OPI Processor

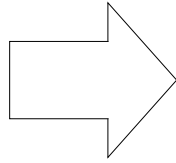
OPI (Open Prepress Interface) is a set of PostScript comments developed by Aldus Corporation that describe the placement, cropping, and adjustment of images within a document. By using CanOPI's OPI processor you can perform page layout with LowRes images from CanOPI's image generating folders. This improves both the performance of your page layout software and the printing process because of the relatively small size of the placement images.

The documents you have prepared with easily handled LowRes images will automatically have these LowRes versions replaced with the original HiRes images when the documents are printed through a CanOPI print spooler.

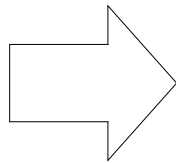
CanOPI's OPI processor has been tested with most common Desktop Publishing Applications for the Macintosh, PC, and, in some cases, UNIX. To make use of the OPI process it is simply a matter of printing the pages created using LowRes images through an OPI spooler created using the EasyAdmin utility. It should be noted that it is possible to mix Hi- and LowRes files on a page.

NOTE *If you intend to use imposition you should first print the 'LowRes' pages to a file and import these into the imposition package. For output from Ultimate's Impostrip and Adobe PressWise, if you are using TIFF Hi- or LowRes, it is necessary to use the Azalea Pre-Press Xtension. If this is not used the position of the HiRes images after OPI will be incorrect.*

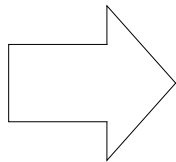
How OPI works



An image is scanned in and is stored as a HiRes image. When it is Drag & Dropped to the CanOPI server, a LowRes image is created. Users can then include this LowRes version in their page layouts.



The file that is sent over the network when the user wants to print the document is much smaller than it would have been if the HiRes image had been included directly in the page layout. In addition, screen refresh and scrolling rates are much faster when using the low-resolution versions in page-layout applications. When the page is sent to a printer via a CanOPI spooler, the LowRes images are automatically stripped out and replaced with the original HiRes images, producing the intended document:



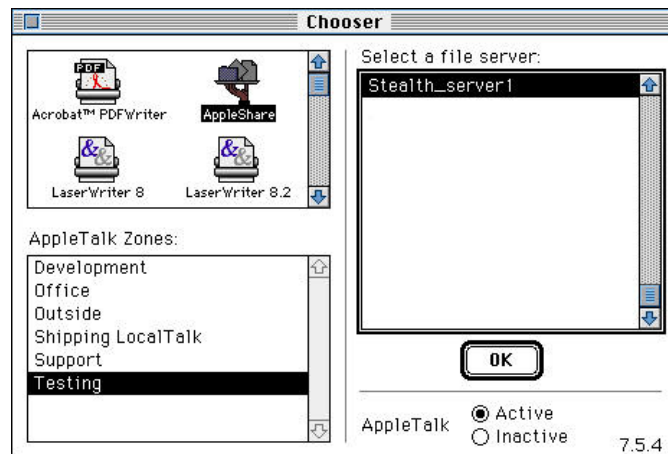
PrintQManager

PrintQManager lets you monitor and control the print queues for all available printers on your CanOPI server. This chapter gives instructions for:

- starting the PrintQManager application
- changing your user authentication
- monitoring and controlling printer queues
- performing administrative tasks as “root”, or as a member of the PQMAdmin group.

Starting the PrintQManager Application

After installing and starting CanOPI, you will find that there is a Server listed in the MacOS Chooser called “CanOPI_<hostname>”, where <hostname> represents the name of your CanOPI host. This is a default server that is published automatically. If your network consists of many zones, you will find your CanOPI server resides in the zone associated with the hosts physical subnet (if you aren’t sure you may simply select each zone until you find the server).



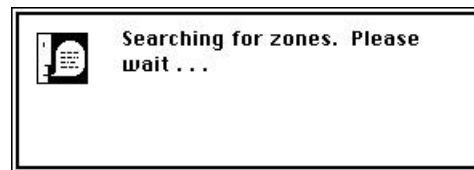
Once you have located your new server with the Chooser, login with your UNIX username and password, or as “root”. In either instance, you will see the volume “MacApps” is available to mount. Users who do not login as root will also see their UNIX home directory published as a volume called “YourHome (<username>@<hostname>)” unless this function has been disabled using EasyAdmin, root’s home directory is not published by default.

Copy this application to your local machine by dragging it to the hard drive icon. Then, double click on the copy of PrintQManger that appears on your local hard drive, this will launch the application.

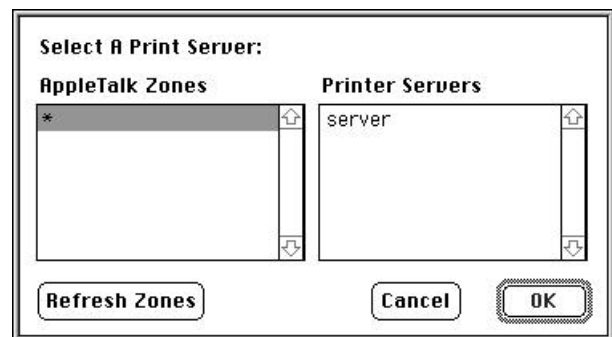
Double-click on the MacApps volume that appears on the desktop. Within is the PrintQManager application. You must copy this application to your local machine.



1. Launch the PrintQManager application by double clicking its icon. A window appears, asking you to wait while the PrintQManager searches your network for AppleTalk zones:



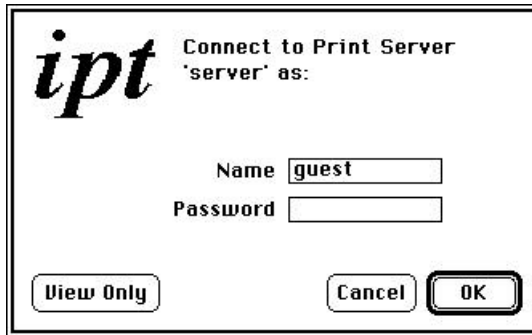
When the PrintQManager has completed its search for AppleTalk zones, the print server selection screen appears:



2. Select from the “Print Servers” list the name of the print server to which you want to connect and click the “OK” button. If your AppleTalk network consists of zones, you must first select an entry from the “AppleTalk Zones” list.

NOTE *Ask your CanOPI administrator for the name and zone of your print server.*

After you click the “OK” button, the user authentication window appears:



The image shows a dialog box titled "Connect to Print Server". On the left is the "ipt" logo. The text "Connect to Print Server" is at the top, followed by "'server' as:". Below this are two input fields: "Name" with the text "guest" and "Password" which is empty. At the bottom are three buttons: "View Only", "Cancel", and "OK".

3. Enter your name and password and click the “OK” button. If you don’t know your name or password, or if you want only to monitor print queues without making changes to them, click the “View Only” button.

NOTE *Ask your CanOPI administrator for your username and password.*

After you click the “OK” button, the PrintQManager window appears. You can now monitor and control the print queues of your network’s printers as described in the remainder of this chapter.

Exiting the PrintQManager

You can exit the PrintQManager application at any time by choosing “Quit” from the “File” menu. If you want to disconnect from your CanOPI print server without quitting the PrintQManager application, choose “Close Connection” from the “Network” menu; to reconnect to a print server, choose “Open Connection” from the “Network” menu.

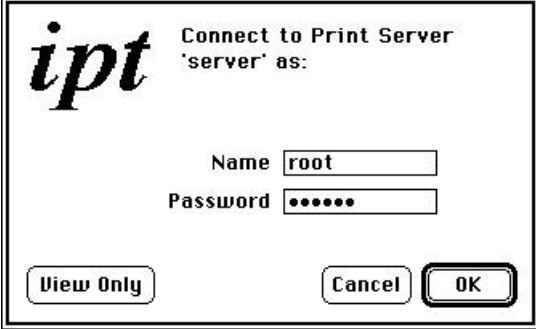
Using the “Window” Menu

As you work with the PrintQManager application, you may have several windows open at one time. Choose items from the “Window” menu to bring needed windows to the front of your screen.

Changing Your User Authentication

You can change your user authentication at any time—for instance if you clicked the “View Only” button during your initial authentication, and you later decide that you want to make changes to the print queues. To change your user authentication:

1. Choose “Reauthenticate” from the “Network” menu. The user authentication window appears:



The image shows a graphical user interface window titled "Connect to Print Server". In the top left corner, there is a stylized logo "ipt". Below the title, it says "Connect to Print Server" and "'server' as:". There are two input fields: "Name" with the text "root" entered, and "Password" with seven dots entered. At the bottom of the window, there are three buttons: "View Only", "Cancel", and "OK". The "View Only" button is on the left, and "Cancel" and "OK" are on the right.

2. Enter your name and password and click the “OK” button.

NOTE By default, you must login as “root” to start, and stop queues, and control other user’s print jobs. If you wish to enable these privileges for a particular user (or users), you must create a group called “PQMAAdmin”, then add these users to the group. For details on creating a group, and adding users to a group, see “Users and Groups Admin” on page **EasyAdmin-28**.

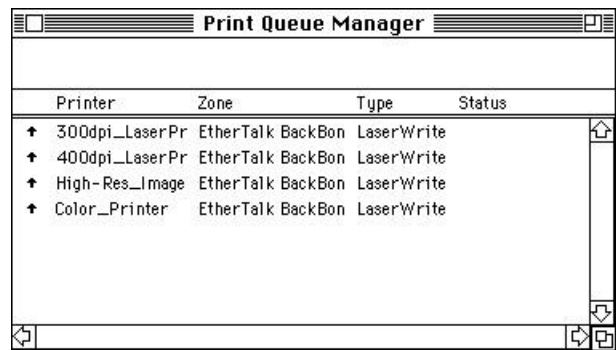
Monitoring and Controlling Printer Queues

As you send print jobs to CanOPI spoolers, you may want to monitor the status of your jobs, and in some cases you may want to exercise control over your jobs. The PrintQManager provides tools for:

- viewing a list of available printers
- identifying the state of printers
- viewing a printer's queue
- suspending and resuming jobs in print queues
- deleting jobs in print queues
- moving jobs between print queues

Viewing a List of Available Printers

After you log in to a CanOPI print server the PrintQManager window appears and displays a list of all available printers:



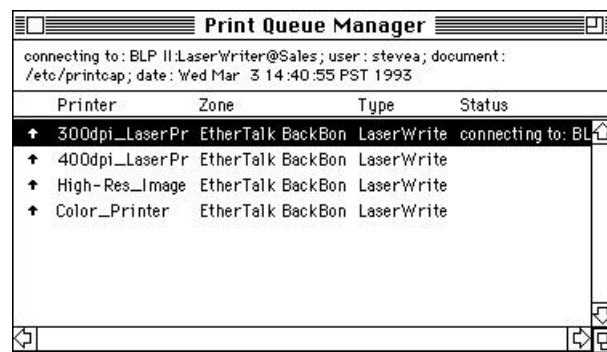
The screenshot shows a window titled "Print Queue Manager". Inside, there is a table with four columns: "Printer", "Zone", "Type", and "Status". The table lists four printers, each preceded by a black up arrow (↕). The printers are: 300dpi_LaserPr, 400dpi_LaserPr, High-Res_Image, and Color_Printer. All four printers have the same Zone (EtherTalk BackBon) and Type (LaserWrite). The Status column is empty. The window has standard Mac OS controls (close, zoom, scroll) and a scroll bar on the right.

Printer	Zone	Type	Status
↕ 300dpi_LaserPr	EtherTalk BackBon	LaserWrite	
↕ 400dpi_LaserPr	EtherTalk BackBon	LaserWrite	
↕ High-Res_Image	EtherTalk BackBon	LaserWrite	
↕ Color_Printer	EtherTalk BackBon	LaserWrite	

In the window above, the PrintQManager window lists four available printers. The up arrows (↕) and the black color of the printer names indicate that queuing and printing are enabled for all four printers (read "Identifying the State of Printers" on page **PrintQManager-79** for an explanation of these symbols and terms).

For each printer, several attributes also appear:

- **Zone** - The AppleTalk zone in which the print spooler resides, i.e., the zone that a MacOS user must select when using the Chooser to select the spooler. This zone may be different than the zone in which the destination device resides.
- **Type** - The AppleTalk device type of the printer. This type is generally “LaserWriter” which indicates that the printer is available when a MacOS user selects the “LaserWriter” icon in the Chooser.
- **Status** - an abbreviated report of the printer’s status. To see the printer’s full status message, simply select the printer’s name:



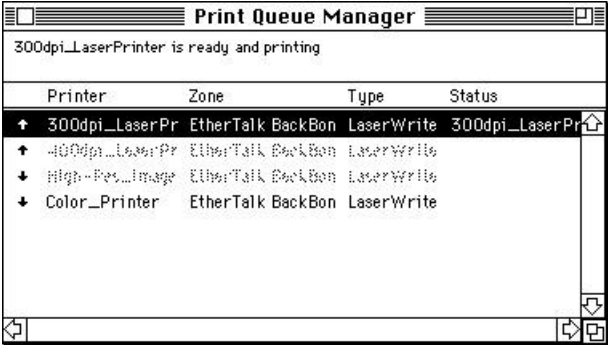
In the window above, the full status message for the printer “300dpi_LaserPrinter” appears at the top of the PrintQ-Manager window.

NOTE You can force the PrintQManager to update its list of printers (e.g., if your CanOPI administrator has made changes to the printer list, but your PrintQManager window has not yet reflected the changes) by choosing “Refresh Printer List” from the “File” menu.

Identifying the State of Printers

Your printer administrator controls the state of printers by **enabling** and **disabling** two print spooler characteristics, **queuing** and **printing**. When queuing is disabled, a spooler will not queue new jobs; when printing is disabled, the spooler will queue new jobs, but it will not send the queued jobs to the destination device. The appearance of entries in the PrintQManager’s printer list reflects each spooler’s current state:

- if queuing and printing are enabled, the printer’s name is black and an up arrow (↕) appears next to the printer’s name
- if queuing is disabled, the printer’s name is greyed-out
- if printing is disabled, a down arrow (⇩) appears next to the printer’s name



In the window above, the states of the printers are:

- 300dpi_LaserPrinter—queuing enabled, printing enabled
- 400dpi_LaserPrinter—queuing disabled, printing enabled
- High_Res_ImageSetter—queuing disabled, printing disabled
- Color_Printer—queuing enabled, printing disabled

NOTE To change a printers state, you must be logged in as “root”, or a user that is a member of the group “PQMAdmin” (this group must be created, and the users added for this ability to be enabled). For details on defining a group, and adding a user to that group, see “User Account Manager” on page **EasyAdmin-28**.

Viewing a Printer's Queue

To view a printer's job queue, select the printer's name in the Print Queue Manager's list of printers and choose "Show Queue" from the "Edit" menu, or simply double-click the printer's name. The "Queue for Printer" window appears:

The "Queue for Printer" window indicates if the printer is "Local" or "Remote". A local printer is any printer whose final spool directory resides on the CanOPI print server. If the printer is "Remote" you can delete print jobs, but you can't suspend them or move them from the queue.

Status	Document	Job#	Owner	Size	Time
1	/tmp/logo1	194	stevea	1053	04:07:0
2	/tmp/tabs1	195	stevea	1053	04:07:0
3	/tmp/toc1	196	stevea	1053	04:07:0

In the window above, the "Queue for Printer" window lists three queued jobs. For each queued job, several attributes also appear:

- **Status** - the current position of the job within the queue—a status of "1" indicates that the job is first in the queue, a status of "2" indicates that the job is second, etc.
- **Document** - the names of input files comprising the job; sometimes these names are unavailable, so the Document attribute indicates "standard input."
- **Job#** - a numeric id by which the job is referred to by UNIX commands such as lprm.
- **Owner** - the name of the user who sent the print job; for MacOS print jobs, the "User Name" as specified in the Chooser (for System6 Macs) or in the "Owner Name" field of the Sharing Setup Control Panel (for System7 Macs) is compared to the list of registered UNIX users on the print server. If the MacOS user name matches a UNIX user name, that name is the owner of the print job. Otherwise, the owner of the print job is "root."
- **Size** - the total size (in bytes) of the print job.
- **Time** - the time and date when the print job entered the queue.

The “Queue for Printer” window displays categories of jobs in a printer’s queue:

- **Active Jobs** - jobs that are waiting in the printer’s queue.
- **Suspended Jobs** - jobs that have been temporarily suspended as described in “Suspending and Resuming Jobs in Print Queues” on page **PrintQManager-82** and that are stored in the “.suspended” directory within the spool directory.

The list of a printer’s suspended jobs appears at the bottom:

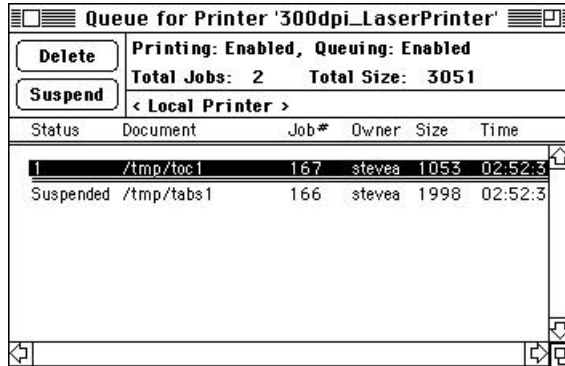
In the window above, the “Queue for Printer” window lists two active jobs, and one suspended job.

You can choose to hide or show the contents of the suspended queues by selecting items from the PrintQManager’s “View” menu:

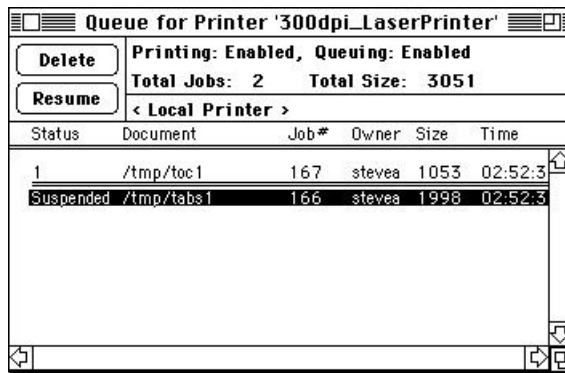
- Choose “Hide Suspended Jobs” from the “View” menu to hide the printer’s list of suspended jobs. When you choose this item, a new item “Show Suspended Jobs” takes its place in the “View” menu.

Suspending and Resuming Jobs in Print Queues

To temporarily suspend an entry in a print queue (e.g., if you want to delay printing of a job until you've confirmed that the destination printer has the proper paper), select an entry in the list of print jobs and click the "Suspend" button. The selected entry is moved to a list of suspended jobs:



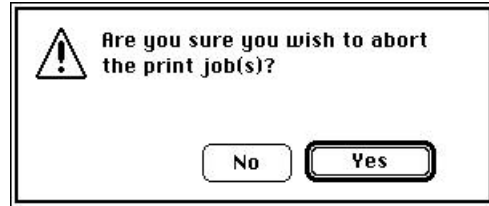
To resume printing of a suspended job, select the suspended job in the list of print jobs and click the "Resume" button:



NOTE *You can suspend only those print jobs that you own. You cannot suspend jobs from a Remote printer's queue; e.g.: a UNIX printer connected to another UNIX host.*

Deleting Print Jobs in Print Queues

To delete an entry in a print queue (e.g., if you accidentally printed the wrong document), select an entry in the list of print jobs and click the “Delete” button. An alert appears asking you to confirm deletion of the selected entry:

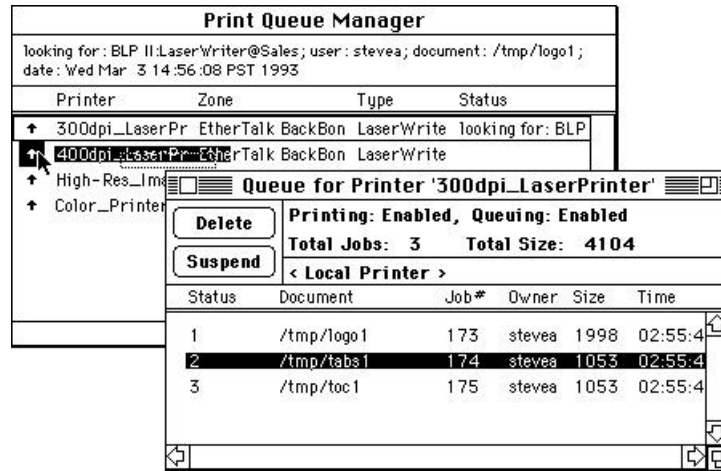


Click the “Yes” button to confirm deletion of the print job. The deleted entry is removed from the list of print jobs, and the status of remaining print jobs are updated (if necessary) to close the gap left by the deleted job.

NOTE *You can delete only those print jobs that you own. You can delete jobs from the queues of both local and remote printers.*

Moving Jobs between Print Queues

To move a print job from one queue to another (e.g., if your print job is in a queue that is moving slowly or if the destination printer goes down), select an entry in a printer's queue and drag it on top of another printer in the "Print Queue Manager" window:



In the window above, a job from the 300dpi_LaserPrinter's queue is being dragged on top of the "400dpi_LaserPrinter" in the "Print Queue Manager" window. Upon releasing the mouse button, an alert appears informing you that the job is being moved:



NOTE You can move only those active print jobs that you own. You cannot move jobs from a Remote printer's queue. Moving a job from one queue to another may yield unexpected results if the destination printers are different types; e.g., if a Quark Xpress file is moved from the queue for a Fiery RIP to a queue for an Apple LaserWriter Plus, the job may not print correctly.

NOTE *You may only resubmit print jobs that you own. Also note that if a Completed job is to be moved between queues it must first be Re-submitted to the original queue.*

Performing Administrative Tasks

By logging in to your CanOPI print server as “root” you gain authority to perform several administrative tasks in addition to the standard queue management tasks. A user other than root may also perform the same administrative tasks, provided they are a member of the group “PQMAdmin” (do not use PQMAdmin as the users primary group). For details on defining a group, and adding a user to that group, see “User Account Manager” on page **EasyAdmin-28**. CanOPI’s PrintQManager provides tools for performing the following administrative tasks:

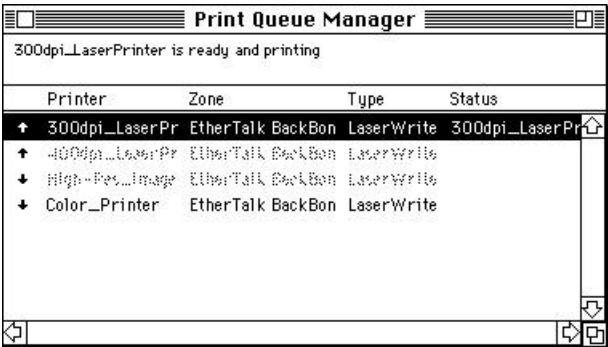
- controlling the state of printers
- reordering jobs in a print queue from any user from any user

Controlling the State of Printers

You control the state of printers by **enabling** and **disabling** two spooler characteristics, **queuing** and **printing**. When queuing is disabled, a spooler will not queue new jobs; when printing is disabled, the spooler will queue new jobs, but it will not send the queued jobs to the destination device.

The appearance of entries in the PrintQManager’s printer list reflects each print spooler’s current state:

- if queuing and printing are enabled, the printer’s name is black and an up arrow (⬆) appears next to the printer’s name;
- if queuing is disabled, the printer’s name is greyed-out;
- if printing is disabled, a down arrow (⬇) appears next to the printer’s name.



In the window above, the states of the printers are:

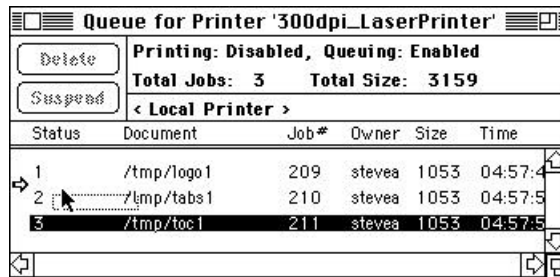
- 300dpi LaserPrinter—queuing enabled, printing enabled
- 400dpi LaserPrinter—queuing disabled, printing enabled
- High Res ImageSetter—queuing disabled, printing disabled
- Color Printer—queuing enabled, printing disabled

To change the state of a printer, simply select the printer’s name in the PrintQManager’s printer list and choose an item from the “Network” menu (these items are: “Enable Printing,” “Enable Queuing,” “Disable Queuing,” and “Disable Printing”).

NOTE To change a printers state, you must be logged in as “root”, or a user that is a member of the group “PQMAAdmin” (do not use PQMAAdmin as the users primary group). For details on defining a group, and adding a user to that group, see “User Account Manager” on page *EasyAdmin-28*.

Reordering Jobs in a Print Queue

To reorder jobs in a print queue (e.g., if a job at the bottom of the queue is urgently needed), select an entry in the queue and drag it to a different position in the queue:



In the window above, job #211 is being dragged from the bottom of the print queue to a position above job #210. Upon releasing the mouse button, the job queue is reordered.

NOTE To reorder print jobs, you must be logged in as “root”, or a user that is a member of the group “PQMAdmin” (do not use PQMAdmin as the users primary group). For details on defining a group, and adding a user to that group, see “User Account Manager” on page *EasyAdmin-28*.

Troubleshooting & FAQ

(Frequently Asked Questions)

This chapter provides a troubleshooting guide, answers to frequently asked questions about CanOPI and its services, and gives instructions for getting help from IPT.

You will find information partitioned into several categories. Each one addresses common problems and questions related to that category:

- While Getting Started (installation)
- AFP
- Print Spooling
- Getting Help

Please explore the appropriate section for any problem you may be experiencing before calling Technical Support.

For information on configuring your CanOPI software to work with UNIX dependent products (e.g.: software that manipulates data both in the UNIX and MacOS environments), see the “Compatibilities” chapter.

Troubleshooting Guide

This section briefly describes the diagnostic tools that you may use when troubleshooting your network and provides solutions to problems you might encounter when using CanOPI services.

Diagnostic Tools

When you attempt to diagnose a CanOPI problem, and before contacting IPT's technical support, you should be familiar with basic UNIX commands such as: `cd`, `ls`, `chown`, `chmod`, `ps`, `ping`, `ifconfig`, and `netstat`.

While Getting Started . . .

Symptom or Question:	Solution:
When you enter your key, you receive the error “malformed key.”	You have entered a key of incorrect length. Make sure you have a key appropriate for your version of CanOPI.
When you test Can-OPI, your default file server's name is “DemoOfCan-OPI@YourHost”.	You have entered an invalid key or no key when configuring your network.
When clicking on the feature buttons in the EasyAdmin window, I get a message saying “Cannot find application”.	Use the resultant browser window to locate the application, then select it. EasyAdmin will “learn” the new location and the problem should not re-occur. If this condition does persist, try rebuilding your desktop file by re-booting your MacOS machine while holding down the Command and Option keys simultaneously. When asked to rebuild your desktop file, select “yes”.
“During start-up of my CanOPI software, I see some unfamiliar messages appear. Should I be concerned?”	<p>Although your CanOPI software does have the ability to report errors in order to diagnose problems, some messages during start-up may appear alarming, but are in fact only a report of status. Some common messages are:</p> <p>killimg syslogd..... During start-up, CanOPI temporarily stops syslogd, the UNIX error manager, so that it may initialize a pipe that provides you with messages about CanOPI services during operation, error logging, etc. Syslogd will be restarted.</p> <p>errmgr..... This message states the CanOPI's error manager is being started. It is not an indication that there are problems during start-up.</p>

AFP ...

Symptom or Question:	Solution:
MacOS computers (and other Apple-Share clients) can't see your file server.	<p>Make sure your MacOS computer and UNIX host are using the same protocol (e.g., EtherTalk Phase I, or EtherTalk Phase II).</p> <p>Check your network's physical connections. If a gateway or router lies between your UNIX host and MacOS client, connect your MacOS computer directly to your UNIX host (to bypass the router) and look for your spooler in the MacOS Chooser. If your MacOS computer can see the host while directly connected, check to see that the router is capable of handling AFP, and that ability is enabled (some routers can be configured to turn off a particular protocol).</p>
MacOS computers (and other Apple-Share clients) can't mount your file server's volumes.	<p>Make sure the clients have access privileges to the file server's volumes. Make sure clients attempting to login have a valid UNIX user account. In the event you are using the <code>/ushare/etc.local/passwd</code> file to define your CanOPI user accounts, make sure there is an entry defined for each desired user.</p>
MacOS computers (and other Apple-Share clients) can't see files residing on a volume.	<p>Make sure the volume's privileges permit your MacOS users to "See Folders" and "See Files."</p> <p>Another possibility is that CanOPI's cache files may be corrupted or out of date. Make sure no clients have mounted the volume and remove all <code>cache</code> files from the volume by issuing the following command at a UNIX command line:</p> <pre>cd <volume path>, where <volume path> is the UNIX path to the root level of the CanOPI volume.</pre> <pre>rm ../rsrc/cache</pre> <p>Repeat this step for any CanOPI volume experiencing this behavior, then remount the volume(s) on the MacOS side and confirm that the missing files have returned.</p>

AFP . . .

Symptom or Question:	Solution:
Icons within a window are stacked on each other, and MacOS computers can't rearrange the position of icons within the volume.	In MacOS System 7 operating environments, you may separate icons that are stacked on top of each other by holding down the "option" key, and selecting "Clean Up Window" from the "Special" pull-down menu in the Finder. Only the owner of a volume/folder can permanently change the arrangement of icons.
"My file server performance seems slow, what should I do?"	<p>If an AppleShare volume publishes a directory that contains an NFS mount point, you can adjust several volume attributes to affect performance. Read "Advanced Configuration" on page AFP-11 for a description of these modifiable attributes.</p> <p>If no NFS mount points are published as CanOPI volumes and performance is slow, get a topological map of your network. See if there is any correlation between the speed deficiency and a particular subnet. This may indicate that there is a routing conflict. Make sure that if you have more than one "seed" router on your network, they are not seeding the same cable with conflicting zone information.</p>
"Can my file server publish itself in more than one AppleTalk zone?"	In short, no. Your CanOPI server may only be published in one zone. If you have multiple servers defined, they must also reside in the same zone.

AFP ...

Symptom or Question:	Solution:
"My Network Trash Folder won't empty. Now what?"	<p>If you are having trouble removing trash from a CanOPI directory:</p> <ol style="list-style-type: none">1. Unmount all CanOPI volumes from your MacOS computers.2. As "root" on your UNIX host, while at the root level of each directory that is published as a CanOPI volume (<code>cd <CanOPI volume path></code>), issue: <code>rm -R 'Network Trash Folder'</code> <code>cd /ushare/bin</code> <code>ls -als grep .dafp</code> <p>Confirm that the files <code>.dafp</code> and <code>.dafp.sh</code> have ownership and permissions set to match those listed below:</p> <pre>.dafp: r-sr-xr-T, root, 60001 .dafp.sh: r-xr--r--, root, system</pre> <p>If these setting are incorrect, login as "root" and issue:</p> <pre>chown root /ushare/bin/.dafp chgrp 60001 /ushare/bin/.dafp chmod 5550 /ushare/bin/.dafp chown root /ushare/bin/.dafp.sh chgrp system /ushare/bin/.dafp.sh chmod 544 /ushare/bin/.dafp.sh</pre> <p>Then, remount your CanOPI volume, and see if the problem persists.</p>

Debugging File Server Problems

Occasionally, IPT's technical support staff may ask you to collect debugging data to help them analyze your CanOPI file server. To collect debugging data from CanOPI's afpssess.x process (in these instructions, "**afpclient**" refers to the username of a MacOS client):

1. Make sure the **afpclient** is NOT logged in to the CanOPI file server.
2. Issue the following commands at a UNIX command line:


```
# touch ~afpclient/afp.log
# touch ~afpclient/afp.bug
# chown afpclient ~afpclient/afp.???
# chmod 777 ~afpclient/afp.???
```
3. Have afpclient log in to the CanOPI server from a MacOS computer.
4. Have afpclient prepare to recreate the problem.
5. Issue the following command at a UNIX command line:


```
# echo 16 > ~afpclient/afp.bug
```

 These steps cause the ~afpclient/afp.log file to grow.
6. Wait ^a15 seconds.
7. Have afpclient recreate the problem.
8. Wait ^a15 seconds.
9. Issue the following command at a UNIX command line:


```
# echo 0 > ~afpclient/afp.bug
```
10. Have afpclient log out of the CanOPI server.

To collect debugging data from CanOPI's afpd process:

1. Issue the following command at a UNIX command line:


```
# echo 16 > /ushare/etc/afp.bug
```
2. Restart CanOPI's File Server service by issuing the command:


```
# /ushare/bin/usrestart afp
```

 These steps cause the /ushare/etc.local/afpd1.bug file to grow.
3. Recreate the problem
4. Issue:

```
# echo 0 > /ushare/etc/afp.bug
```
5. Repeat step 2.

Print Spooling . . .

Symptom or Question:	Solution:
MacOS computers (and other Apple-Share clients) can't see your spooler.	<p>Make sure you've started the Print Spooler process.</p> <p>Make sure your MacOS computer and UNIX host are using the same protocol (e.g., EtherTalk Phase I, or EtherTalk Phase II).</p> <p>Check your network's physical connections. If a gateway or router lies between your UNIX host and MacOS client, connect your MacOS computer directly to your UNIX host (to bypass the router) and look for your spooler in the MacOS Chooser. If your MacOS computer can see the spooler while directly connected, check to see that the router is capable of handling AFP, and that ability is enabled (some routers can be configured to turn off a particular protocol).</p>
<u>AppleTalk to AppleTalk Spoolers</u>	
MacOS computers (and other Apple-Share clients) can see your spooler, but print jobs are not printed.	<p>Make sure you have specified the correct LaserWriter name and zone in your spooler definition.</p>
<u>AppleTalk to UNIX Spoolers</u>	
MacOS computers (and other Apple-Share clients) can see your spooler, but print jobs are not printed.	<p>Make sure you can print a PostScript file to your printer with a UNIX lpr command.</p> <p>Make sure you have specified the correct printer name in your spooler definition.</p>

Print Spooling . . .

Symptom or Question:	Solution:
Errors get reported that look similar to: "Times Roman not licensed, using Courier", "Helvetica not licensed, using Courier", etc.	<p>Use EasyAdmin's "Print Spooling" to confirm that the fonts file for AppleTalk printer has been defined correctly. Use this definition to locate the actual fonts file, and use a text editor to confirm that there is an entry for each permanently downloaded font on your printer. If this file does not appear to be correct, remove it and restart spooling (<code>/ushare/bin/usrestart splr</code>) to rebuild the file.</p> <p>Also, try selecting the option "Unlimited Downloadable Fonts" in the "Page Setup" menu of the application you are printing from on the MacOS.</p>
Fonts are printed as bitmaps instead of scaled fonts.	Make sure you have created a fonts file that lists your printer's resident fonts and that you have correctly referenced this fonts file in your spooler definition. See the instructions for the appropriate spooler type in the "spoolers" chapter for more details.
Special characters (e.g., bullets) are not printed correctly.	In the event the fonts file for the printer contains fonts which are not permanently downloaded, some fonts may not print correctly. Confirm that the fonts file is accurate for the printer. For more information about creating a fonts file, see the "Spooler" chapter for the appropriate type of spooler you have defined for this device.
<u>UNIX to AppleTalk Spoolers</u>	
UNIX clients' print jobs are not printed.	<p>Make sure you have specified the correct LaserWriter name and zone in your spooler definition.</p> <p>Make sure you can print directly to the LaserWriter by using CanOPI's <code>lwdq.x</code> program. See the "Commands" chapter for more information.</p>

Print Spooling . . .

Symptom or Question:	Solution:
	<p data-bbox="443 401 1062 436"><u>AppleTalk to UNIX to AppleTalk Spoolers</u></p> <p data-bbox="443 464 1269 569">These spoolers, for troubleshooting purposes, can be treated as a combination of an AppleTalk to UNIX and a UNIX to AppleTalk spooler.</p>

Getting Help

If you have qualified for 30 days free support, or if you have purchased a maintenance program from IPT, you can call IPT's technical support lines:

In the US call +1 (805) 541 3076 between 9:00 am and 5:00 PM PDT.

In Europe call +44 (1638) 663999 between 9:00 am and 5:00 PM GMT or +31 35 694 9499 between 9:00 am and 5:00 PM CET.

In addition, after hours Emergency Support is available for a fee of \$100 per hour or part thereof during weekdays, \$200 per hour weekends, billing by credit card is preferred.

When you contact the CanOPI technical support line, please be prepared to provide the following information:

- a description of your UNIX host, i.e., the hostid, model, and operating system version.
- your version of CanOPI as indicated in the `/ushare/bin/VERSION` file.
- a description of your problem.

Index

A

- AFP volumes
 - within other volumes **EasyAdmin-40**
- afp.servers file
 - parameters for entries **EasyAdmin-39**
- AppleTalk
 - sources of information **Quick Start-8**
- Authorization Key **EasyAdmin-25**
 - Updating **EasyAdmin-27**

C

- CanOPI
 - defined **Preface-2**
- commands
 - for troubleshooting **Troubleshooting-90**

D

- demo mode
 - running in **Troubleshooting-91**
- Drag & Drop
 - example **Drag & Drop-68**
- Drag and Drop
 - description **Drag & Drop-61**

E

- EasyAdmin **EasyAdmin-19**
- File Sharing Admin **EasyAdmin-35**
- Info Admin **EasyAdmin-25**
- Print Spooling Admin **EasyAdmin-46**
- Starting **EasyAdmin-20**
- User Account Attributes **EasyAdmin-34**
- Users and Groups Admin **EasyAdmin-28**
- Volume Attributes **EasyAdmin-44**

F

- file server
 - creating **EasyAdmin-37**
 - deleting **EasyAdmin-38**
 - volumes within other volumes **EasyAdmin-40**

I

- Info Admin
 - Using **EasyAdmin-25**
- IPT
 - getting help from **Troubleshooting-99**

K

key

errors **Troubleshooting-91****M**

MacApps

contents **Quick Start-16****O**

OPI

how it works **Drag & Drop-70**

OPI Processor

and Quark Xpress **Drag & Drop-70****P**

print spooler

AppleTalk options **EasyAdmin-48**creating **EasyAdmin-47**deleting **EasyAdmin-58**options **EasyAdmin-48**output device options **EasyAdmin-50**UNIX options **EasyAdmin-48**

PrintQMgr

controlling the state of printers **PrintQManager-86**deleting Jobs **PrintQManager-83**moving jobs **PrintQManager-84**reordering jobs **PrintQManager-88**starting **PrintQManager-72**suspending jobs **PrintQManager-82**viewing a Queue **PrintQManager-80**viewing available printers **PrintQManager-77****T**

troubleshooting

commands **Troubleshooting-90**troubleshooting guide **Troubleshooting-90****U**

user accounts

attributes **EasyAdmin-34**managing **EasyAdmin-28**

uShare

defined **Preface-3**uShare Server Attributes **EasyAdmin-39****V**

volumes

within other volumes **EasyAdmin-40**