

3+Open™ for Macintosh® Release Notes

**For 3Com User Group Information
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3+Open™ for Macintosh®

Release Notes

These release notes provide essential information that you need to install and use 3+Open™ for Macintosh®.

The first section contains product feature information that supersedes the information in the *3+Open for Macintosh Administrator's Guide*. The second section contains installation information. Be sure to read both these sections before you install 3+Open for Macintosh on your network.

The remainder of the release notes contain information about the software and the *3+Open for Macintosh Administrator's Guide*. Tuning, troubleshooting, and error message tips and information are included. Use the table of contents to find the information you need.

NOTE: For page-specific changes to *3+Open for Macintosh* documents, see the "Documentation Notes" section in these release notes. All page references refer to the *3+Open for Macintosh Administrator's Guide*.

Features Notes

This release of 3+Open for Macintosh differs from the product described in the *3+Open for Macintosh Administrator's Guide* in several ways. This section describes those differences.

Token Ring

Token ring is not supported. A TokenTalk™ port cannot be configured. For further information, see the **porttype** parameter, pages A-24 and A-34, in Appendix A, Configuration File Parameters. The **porttype** parameter cannot be TokenTalk.

AppleTalk Phase 2

The AppleTalk® Phase 2 stack does not contain a router. For details, see the “Installing the 3+Open AppleTalk Phase 2 Stack” section in these release notes.

DayStar Adapters

You can install multiple DayStar™ LocalTalk adapters in servers with a standard AT bus (3Servers® and PC servers). You cannot install multiple microchannel versions of DayStar LocalTalk adapters in a PC server due to a built-in limitation in the adapters.

For information on worldwide DayStar LocalTalk adapter distribution, call 1-800-962-2077.

Maximum Macintosh Users

The maximum number of Macintosh workstation users that can be simultaneously logged into a given 3+Open for Macintosh server is 29. The number of Macintosh users is completely independent of the number of PC users and the network media being used. For further information, see the **maxaspclients** and **maxnamedpipeclients** parameters on pages A-4 and A-5, Appendix A, Configuration File Parameters.

Server Requirements

To run 3+Open for Macintosh, you need a minimum 8 MB system. This minimum does not include memory requirements for additional services such as Name, Mail, or Internet.

Backup

For information on backing up and restoring Macintosh files stored on a 3+Open for Macintosh server, see the *3+Open Backup Guide Addendum for Macintosh*, included in your 3+Open for Macintosh package.

LocalTalk/3Server Conflict

Due to shared circuitry, some of the 3Com 3Server communication ports cannot be used if the built-in LocalTalk port is also used. If you are using the 3Server LocalTalk port, do not attempt to connect printers, modems, and other devices to the ports identified in the list that follows.

3+Open comm port:	Marked on back panel:
<u>3S/4xx</u>	
COM3	SYNC A
COM4	SYNC B
<u>3S/5xx</u>	
COM3	COM2 [3+] or COM3 [3+Open]

3Com Bridge and Router Compatibility

3Com bridges and routers, such as BR/2000, do not route AppleTalk protocols, but you can use them as transparent bridges on a 3+Open for Macintosh network. Because the AppleTalk protocols pass through the bridge, you *can* connect a remote Ethernet network running 3+Open for Macintosh using the BR/3000 or IB/3000 in bridging mode.

3+ Interoperability

3+Open for Macintosh has full interoperability with 3+File, 3+Print, and other 3+ services. Macintosh workstation users can have 3+ and 3+Open volumes open on the desktop simultaneously.

AppleShare® File Server User's Guide

The *AppleShare File Server User's Guide* is not included in the 3+Open for Macintosh package. To obtain copies, see an authorized Apple dealer or reseller.

Installation Information

You must install the 3+Open Version 1.1 Maintenance Update on an existing 3+Open server before you install 3+Open for Macintosh. The correct disks are part of your 3+Open for Macintosh package. See the *3+Open Version 1.1 Maintenance Update Release Notes*.

AppleTalk Phase 1

When you install the AppleTalk Phase 1 stack/router on large internets, you may want to use the internal network zonenumber as a means of segmenting large Ethernet networks into multiple zones for 3+Open-specific services like Macintosh Print Service.

While all ports—across multiple servers, connected to the same physical network—in Phase 1 must be in the same zone, each 3+Open server's *internal* network zonenumber in Phase 1 can be different. All zonenumber, whether for internal or external ports, appear in the Chooser. To obtain the effect of having multiple zones on a single Ethernet network, you set up subsets of servers with internal networks that have the same zonenumber. The end result is effective segmentation of an Ethernet backbone into multiple zones.

Reinstallation

If you install over a previously installed and running AFP server, or if you remove the AFP server, the installation program asks if you want to save the current AFP server configuration. If you have volumes configured and want to continue to have them defined, select the default value. If you want to start from scratch, and do not want to save your current volume configuration or primary group information about users, select No.

AppleTalk Phase 2

The 3+Open AppleTalk Phase 2 stack in this release of 3+Open for Macintosh allows you to configure a single AppleTalk port on a server. This AppleTalk Phase 2 stack has no routing capability, but does support third-party Phase 2 routers and the 3+Open Mail LocalTalk support component of 3+Open for Macintosh. You cannot currently use the 3+Open AppleTalk Phase 2 stack to connect several AppleTalk networks, such as LocalTalk and Ethernet, together.

The parameters **zonelist**, **enablerouter**, and **defaultport** are not included in the PROTOCOL.INI file when the Phase 2 stack is installed.

If you are using a third-party router or plan to install one on the network, you should assign a **networkrange** parameter for the server's AppleTalk port. The **networkrange** should be a subset of the range that is, or will be, established for the connected network by the third-party Phase 2 router. This ensures that the server will remain visible to users even if a router is subsequently started on the network. For details, see step 6 in the installation instructions that follow.

Installing the 3+Open AppleTalk Phase 2 Stack

You may choose to install the 3+Open AppleTalk Phase 2 stack, rather than the 3+Open AppleTalk Phase 1 stack/router, if:

- You already have Phase 2 routers on your network.
- You have a single network with no routers installed, you have no short-term need to do routing, and you want to install the most recent version of AppleTalk.

***NOTE:** You begin the process of installing 3+Open for Macintosh by running the 3SIS program. For instructions, see pages 2-8 to 2-12 in Chapter 2, Installing 3+Open for Macintosh.*

The instructions that follow replace those on pages 2-20 to 2-24 in Chapter 2, Installing 3+Open for Macintosh.

To install the AppleTalk Phase 2 stack:

1. **Select AppleTalk Phase 2 Stack from the Install a Service dialog box and choose the OK command button.**
- If you are installing on a 3Com 3Server, the port choices appear in the following dialog box:

Selection of Port for AppleTalk Protocols	
Builtin 3Server Ethernet	[Yes]
Builtin 3Server LocalTalk	[No]
Other Ethernet Adapter	[No]
Daystar LocalTalk Adapter	[No]
<OK> <Cancel>	

Figure 1. Selection of Port for AppleTalk Protocols on a 3Server Dialog Box

- If you are installing on a PC server, the port choices appear in the following dialog box:

Selection of Port for AppleTalk Protocols		
Etherlink II Adapter (3C503)	[No]
Etherlink/MC Adapter (3C523)	[No]
Other Ethernet Adapter	[No]
Daystar LocalTalk Adapter	[No]
<OK> <Cancel>		

Figure 2. Selection of Port for AppleTalk Protocols on Other Than a 3Server Dialog Box

2. Select the port and enter Yes.

You may only select a single port.

3. Choose the OK command button to continue.

NOTE: If you entered Yes for the DayStar LocalTalk adapter, you are asked to provide the I/O address. 0x340 is the default hexadecimal I/O address for DayStar adapters. This parameter is needed to configure the 3+Open driver for any DayStar adapter used on a 3+Open server. For other configuration information, see the installation manual for your DayStar adapter.

4. If prompted, enter the Adapter Section title.

You must enter the Adapter Section title—such as EtherLinkII—just as it appears in the PROTOCOL.INI file.

- If you chose Other Ethernet Adapter in step 1, enter the Adapter Section title that is in the PROTOCOL.INI file.

- If you chose EtherLink II Adapter or EtherLink/MC Adapter, the correct Adapter Section title appears in the dialog box.
- If you have selected Built-in 3Server Ethernet, Built-in 3Server LocalTalk, or DayStar LocalTalk in step 2, you are not prompted for an Adapter Section title. The AppleTalk Phase 2 stack is automatically installed.

If you are using any type of Ethernet port, you will see steps 5, 6, and 7. If not, go to step 8 to enable the stack.

5. Choose the OK command button to accept the information.

If you are using an Ethernet port go to step 6. If not, go to step 8.

6. Enter Yes if you have a router on the connected network or *plan* to put a router on the network.

You see a prompt if you are using an Ethernet port.

If you have no router present or planned (if you choose No), go to step 8.

If you choose Yes, you are prompted for starting and ending network range numbers and a default zone.

- To provide a **networkrange** for the stack to use if a router is not present on the network when the server boots, enter the starting and ending network range numbers. If you do not know the range, leave the defaults. (Using the defaults will cause the Phase 2 stack to use Apple-defined default network number ranges and *may* result in network number conflicts. See the paragraph that follows.)

The **networkrange** for the server must be a subset of the range defined by a (current or planned) third-party router for the network. For example, if the router's **networkrange** is 2 to 20, the server's **networkrange** could be 3 to 5. If the server's **networkrange** is not a subset, bringing up a router can result in network number conflicts and a server that is inaccessible to Macintosh workstation users who try to establish new sessions. Currently established sessions will continue to work, but no new ones can be established.

- Enter a default zone. This determines the zone in which 3+Open for Macintosh File and Print Services will be located. Leaving the default value will cause services to be located in the default zone defined by the current or planned seed router.

7. Choose the OK command button to accept the information.

Several more messages appear until the installation of the AppleTalk Phase 2 protocol stack is completed. The next step is to enable it.

- 8. Choose Enable a Service from the Operations menu.**
- 9. Select 3+Open AppleTalk Phase 2 Stack and choose the OK command button.**
- 10. Choose the OK command button again to confirm your selection.**

A message tells you that the operation has been completed successfully.

11. Choose the OK command button.

This completes the installation and enabling of the AppleTalk Phase 2 stack. You may now install the other components of 3+Open for Macintosh.

Upgrading 3+Mail CP

To run on an AppleTalk Phase 2 network with an EtherTalk 2.0 driver, Macintosh users with 3+Mail® for Macintosh must upgrade the 3+Mail CP file to version 1.6. The 3+Mail CP file is used by 3+Mail for Macintosh to access the 3+ and 3+Open Name service over Ethernet. It is also modified to work with 24-bit monitors using 32-bit QuickDraw.

The 3+Mail CP file, version 1.6, can be downloaded from the Ask3ComSM Forum, Library 4, Patches and Fixes. If you need assistance using Ask3Com, call 1-800-876-3266. Press 3, then 3 again.

When you provide version 1.6 of the 3+Mail CP icon to affected Macintosh network users, be sure to remind them to remove any previous versions of 3+File or 3+Mail CP files, and then to install the new file in the System Folder on their startup disk. For installation instructions, see Appendix D, Getting Started on a 3+Open Network in the *3+Mail for Macintosh User Guide*.

NOTE: *3+Mail for Macintosh users on a LocalTalk network connected to a 3+Open server must place their mailboxes on a 3+Open for Macintosh server or on a local hard disk, not on a 3+ server.*

Upgrading from Phase 1 to Phase 2

When you upgrade from AppleTalk Phase 1 to Phase 2, or reinstall over an existing AppleTalk Phase 2 stack, all existing global parameters and individual port parameters contained in the [AppleTalk] section of the PROTOCOL.INI file are lost.

To keep a copy of existing parameters:

1. Copy the [AppleTalk] section in the PROTOCOL.INI file before upgrading or reinstalling.
2. Rename the copied section title [Old_AppleTalk] and print it.
3. After performing the upgrade or reinstallation, use the data in the [Old_AppleTalk] section to edit the [AppleTalk] section in the new version of the PROTOCOL.INI file.

Installing on a Server with the 3+Open Internet/X.25 Service Already Installed

Internet/X.25 and the 3+Open Mail LocalTalk support component use different versions of the XNS driver. If both Internet/X.25 and the 3+Open Mail LocalTalk support component are installed on the same server, you should use the Internet/X.25 driver.

If you are installing the 3+Open Mail LocalTalk support component on a server with the Internet/X.25 service *already* installed, you must follow a special installation procedure. This procedure preserves the Internet/X.25 version of the XNS driver. If Internet/X.25 is installed after the 3+Open Mail LocalTalk support component, no action is necessary.

To install the 3+Open Mail LocalTalk support component on a server with Internet/X.25 already installed:

1. Type:

```
net stop 3internet2
```

2. Disable the 3+Open Internet/X.25 Service using 3SIS.

3. Install and enable the 3+Open Mail LocalTalk Support component.

For instructions, see page 2-32 in *Chapter 2, Installing 3+Open for Macintosh*.

4. Enable the 3+Open Internet/X.25 Service using 3SIS.

5. Reboot the installed server.

Before Rebooting a 3+Open Server

Before rebooting the server, be sure to stop the cache and all services. This section describes three alternate methods of stopping the server.

You can shut down other services before shutting down the LAN Manager server. *Be sure to shut down the LAN Manager server last.*

Alternative 1: Shutting Down a Single Server

This procedure lets you safely turn off file caching and stop services on a single server. All data is written to disk before the server is rebooted. You can execute this procedure from any OS/2 workstation.

To stop the cache program and perform an orderly shutdown from an OS/2 workstation:

1. Log in as an Admin for `\\servername`.
2. Type the following lines in succession for the server you want to stop:

```
net admin \\servername /c net start net run
net use x: \\servername\admin$
x:
net run cache /lazy:*:off
net run cache /stop
c:
net use x: /d
net admin \\servername /c net stop afpserver
{put other services to stop here}
```

If you are on a 3Server, reboot. If you are on a concurrent server, enter the following line:

```
net admin \\servername /c net stop server
```

Alternative 2: Creating a Batch File

The commands in the batch file that follows can be placed in a .CMD file that stops all possible services in succession, stopping the server last.

In such a file, each `servername` could be replaced with standard batch file parameters (for example, %1). Entering the single command `x servername` causes the batch file named X to execute, replacing the %1 parameters with the `servername`.

In such a file, you should wait approximately five minutes after stopping the 3+Open Mail and Name Services to allow them to perform normal shutdown procedures and close files.

If you plan to use a batch file to stop all services in succession, you need to copy the WAITN.EXE program to the same location as the batch file. The WAITN.EXE program is stored on the *Server Installation #2* diskette (it is not a standard program of 3+Open LAN Manager).

The **-m** parameter of the WAITN.EXE program in the example that follows sets the amount of time you wish the batch file to pause. The **-q** parameter specifies that the command is not to return output to the operating system.

Place the batch file on each server in a well known location (for example, in the root directory of the server). Then stop the server with the command line:

```
net admin \\servername /c at {time} c:\shutdown
```

where time is the time of day in 24-hour format when you want the batch file to begin execution.

To create a shutdown batch file enter the following lines:

```
copy con shutdown.cmd
@ rem shutdown.cmd
net send * "going down in one minute! unlink now!!"
waitn -q -m1
net stop 3mail /y
net stop 3name /y
waitn -q -m5
net stop afpserver
net stop server /y
c:\os2\cache /lazy:*:off
c:\os2\cache /stop
```

NOTE: *Macintosh users will not receive the "Going down in one minute! unlink now!!" message in this batch file. Use the 3+Open for Macintosh Administrator's Application to shut down the AFP server if you want to notify users, since it permits a timed shutdown with user notification.*

Alternative 3: Before Stopping a 3+Open Server

You must stop the 3+Open for Macintosh server and all services *before* you stop the LAN Manager server. Use this command to stop the 3+Open for Macintosh server:

```
net stop afpserver
```

***NOTE:** The cache, when used in lazy write mode, should be shut down prior to power-off to ensure that data written to the server is written to disk, rather than just to cache memory. Cache memory is erased when there is a power interruption.*

From a concurrent server type:

```
net stop rdr
```

and respond to the prompts to stop the redirector, the 3+Open for Macintosh server, and all services.

***CAUTION:** Stopping the LAN Manager server before the 3+Open for Macintosh server will cause the 3+Open for Macintosh File Service process to crash. If the NET STOP SERVER command is performed with the 3+Open for Macintosh server still running, Macintosh workstation activity will crash the 3+Open for Macintosh File Service.*

Software Notes

This section contains tips and information about working with access privileges, setting up 3+Mail for Macintosh users, setting up switch launch users, and using or modifying 3+Open for Macintosh default extension mappings.

***NOTE:** The Administrator's Application—the program that you use to administer 3+Open for Macintosh—is also referred to as MACADMIN in some of the 3+Open for Macintosh documentation.*

Access Privileges

Access privileges which you add using the LAN Manager Net Admin application are not necessarily reflected in 3+Open for Macintosh. In particular, you can add restrictions to folder or volume access privileges but cannot expand privileges. AFP privileges are not enhanced by LAN Manager permission enhancements.

For example, if an administrator changes a folder's associated group permissions from R to RWCDXA, intending to augment See Files and See Folders with Make Changes privileges, the changes are not reflected in 3+Open for Macintosh privileges. The owner must explicitly set the privileges.

3+Open for Macintosh allows a single user owner, with a single associated group, per folder or volume root directory; it is not possible to establish co-owners. In addition, the owner of a folder is supreme—even above an Admin user—with regard to access privileges for a folder. Setting privileges on a folder in AppleShare removes all extraneous LAN Manager permissions and forces LAN Manager permissions to be derived from the AFP permissions, as described in Chapter 4, Working with Access Privileges.

3+Open Mail

Macintosh users with 3+Mail for Macintosh must:

- Upgrade the 3+Mail CP file to version 1.6 if they are using an AppleTalk Phase 2 network with an EtherTalk 2.0 driver, or if they are using a 24-bit monitor with 32-bit QuickDraw. For further information, see “Upgrading 3+Mail CP” earlier in these release notes.
- Place mailboxes on a 3+Open for Macintosh server or on a local hard disk, not on a 3+ server, if the user is on a LocalTalk network connected to a 3+Open server.

Macintosh users with 3+Mail for Macintosh *may* need to use the Chooser to select a zone—containing a server on which the 3+Open Mail LocalTalk support component is installed—in order to use the Name service with 3+Open Mail. This depends on network organization and whether multiple zones are present. For details, see the section that follows.

NOTE: If you are installing the 3+Open Mail LocalTalk support component on a server with the 3+Open Internet/X.25 service already installed, see the section “Installing on a Server with the 3+Open Internet/X.25 Service Already Installed” earlier in these release notes.

Working with Multiple 3+Open Mail LocalTalk Support Installations

When more than one 3+Open Mail LocalTalk support component is installed within an AppleTalk zone, each such component, or gateway, is available from the Macintosh Chooser as a different path to the same network. (If all gateways are on Phase 1 servers with internal networks in the same zone, or Phase 2 stacks in the same zone, the same 3+ domain name is repeated in the Chooser.) For the 3+Open Mail user, it will not be clear which gateway is the most efficient path to access the Mail and Name services.

There are several ways you can work around this—so mail users do not have to make a Chooser selection—depending on your network organization. One alternative is to group LocalTalk users by location, assign a single zone that encompasses all those users (or collection of networks containing those users), and install a single 3+Open Mail LocalTalk support component on one server in that zone. Another alternative is to install 3+Open Mail LocalTalk support components on each server with a LocalTalk network attached. Both alternatives are described below.

Alternative 1

When you group LocalTalk users by location, you establish a *single zone* for each group of connected networks. You install the 3+Open Mail LocalTalk support component on *one* server within the zone. This creates a situation where that server potentially handles multiple LocalTalk networks. You place File and Print services in the zone as well (in one or more servers) so all the services a LocalTalk network user needs are in that single zone.

A possible disadvantage of this method is that it may result in poor mail performance if the zone is too large and too many workstations on LocalTalk networks are trying to route mail through the 3+Open Mail LocalTalk support component on the single server. In such circumstances, either creating two zones from the original zone and installing another 3+Open Mail LocalTalk support component, or reducing the number of services running on the server, may be necessary.

Example: The 3+Open Mail LocalTalk support component is installed on a server in `zone` (and `zone_internal` if Phase 1) set as `Z`. You assign two LocalTalk networks that will route their mail through server `Z` to the same zonename, `Z`. Everyone located in zone `Z` will default to the correct zone in the Chooser and will use the `Z` gateway for mail.

Alternative 2

To establish default zones when the 3+Open Mail LocalTalk support component is installed on *each server* with a LocalTalk network attached:

1. **Place each Phase 1 server containing the 3+Open Mail LocalTalk support component in a separate zone using different internal zonenames.**
2. **Make the internal zonename (the `zone_internal` parameter in the `PROTOCOL.INI` file) the same as the LocalTalk network zone (the `zone` parameter in the `PROTOCOL.INI` file).**
3. **Put each 3+Open Mail LocalTalk support component into its own AppleTalk zone, using a zonename identical to that of the server.**

On a Phase 1 internet, use the `zone_internal` parameter to give a different internal zonename to each of the 3+Open Mail LocalTalk support component servers on an Ethernet backbone.

On a Phase 2 internet, use the `defaultzone` parameter to put each server in a separate zone, and have a third party router define all the zones needed.

Example: you have three servers on an Ethernet backbone, Phase 1. One server has `zone` and `zone_internal` defined as X, one server has `zone` and `zone_internal` defined as Y, and one server has `zone` and `zone_internal` defined as Z. You place one 3+Open Mail LocalTalk support component in zone X, one in zone Y, and one in zone Z. Each Mail component will default to the correct zone for users, and they will not have to change zones in the Chooser.

Using this method makes the File and Print services on a particular server visible *only* within the named zone. If not all needed services are installed on each server, users will have to choose a different zone to get access to whatever service is not contained within their default zone.

For further information about 3+Open Mail LocalTalk support configurations and zonenames, see Appendix B, AppleTalk Router Concepts and Internet Planning.

Switch Launching

3+Open for Macintosh users who switch launch may be asked to reinsert the startup disk. Any startup document that keeps a file open during switch launching—as INITs like Super Clock and SoundMaster commonly do—will cause the System file to ask for the disk to be reinserted. So long as the user reinserts the disk when asked, switch launching will work fine. However, there are several things a user can do to prevent this situation:

- Keep the System Folder on the switch-launch startup disk as minimal as possible. Use caution in adding INITs to the switch-launch startup disk.
- If not using Ethernet drivers for AppleTalk Phase 2, and if AppleTalk version 54 is in the System Folder on the switch-launch disk, move AppleTalk version 54 out of the System Folder.

Switch launch users with workstations running Macintosh System software version 6.0.5 and MultiFinder will have trouble accessing desk accessories unless they take one of two actions:

- Remove the MultiFinder file from the System folder on the network volume used for switch-launching. The switch launch process will automatically launch into the Finder, where the desk accessories work properly.
- Start up the desired desk accessory by pressing and holding the Option key while selecting the desk accessory from the Apple menu. This method allows the user to continue to work under MultiFinder.

Desk accessories and switch-launching work fine under the Finder in System 6.0.5.

Concurrent File Sharing

Shared file access does not work when an OS/2 workstation user attempts to access a file from the concurrent server's workstation. When Macintosh and LAN Manager PC users want to open files in shared mode and use range locking to control access to common files, make sure the OS/2 workstation users do *not* use concurrent servers as workstations.

Using Application File Extensions

Default extension mappings for well-known applications that can share a common internal document format in the PC and Macintosh worlds are installed with the 3+Open for Macintosh File Service. The default extension mappings are listed in Table 1. They also appear in the Server Options dialog box; you use this dialog box to add, delete, or modify extension mappings.

The extension mappings provide the server with a method of associating a PC file extension with Macintosh type and creator information. This method allows the Finder and Macintosh applications to treat the files as Macintosh files so

a Macintosh application user can read a document or file created in the PC version of the application.

The default extension mappings are set at 3+Open for Macintosh server installation; their scope is server-wide.

Table 1. Default Extension Mappings

PC Application	Mac Application	Extension	Type	Creator
Symantec Ready DBase format	Symantec MORE™ FoxBASE®/+	.RDY .DBF	TEXT F+DB	MORE* FOX+
WKS, WK1 format	Microsoft® Excel™	.WKS .WK1	TEXT TEXT	XCEL† XCEL
Microsoft Excel (chart) (spreadsheet) (macro sheet) (workspace)	Microsoft Excel 2.2 (chart) (spreadsheet) (macro sheet) (workspace)	.XLC .XLS .XLM .XLW	XLC XLS XLM XLW	XCEL XCEL XCEL XCEL
Microsoft Word (document) (style sheet) (glossary)	Microsoft Word (document) (style sheet) (glossary)	.DOC .STY .GLY	WDBN TEXT TEXT	MSWD MSWD MSWD
Aldus PageMaker®	PageMaker 3.0	.TIF .PM3	TIFF ALB3	ALD3 ALD3
Aldus PageMaker Encapsulated PostScript® format Executable file	PageMaker 2.0 Adobe Illustrator™ '88	.PUB .EPS .EXE .COM	PUBF EPSF DEXE DEXE	ALD2 ARTZ 3MAC‡ 3MAC‡
Unknown file		All others	TEXT	3MAC‡

* Requires filter supplied with MORE application. Symantec's ThinkTank® for the PC can be added using the same type and creator as MORE; also requires filter supplied with MORE.

† WKS and WK1 formats are used by Lotus 1-2-3 and other spreadsheet applications.

‡ Built-in default icons provided by 3+Open for Macintosh File Service.

NOTE: *There is no difference between Word 3.0 and Word 4.0 type and creator. Whichever version is on a particular workstation uses the extension mappings in Table 1. For compatibility information, see the Microsoft Word documentation.*

When more than one application that uses the same PC extension is in use on a particular server—for example, two spreadsheet programs like Excel and Wingz™ that use .WKS and .WK1—you must either choose to use only one or create different PC extensions to use for the second application. Your choice depends on the Macintosh users that will be using the files. Table 2 shows that Wingz reads files with a .WKS extension just as does Excel, but has different type and creator information.

Table 2. Substitute Extension Mappings

PC Application	Mac Application	Extension	Type	Creator
WKS, WK1 format	Informix Wingz	.WKS	TEXT	WNGZ
		.WK1	TEXT	WNGZ

You can also, if you need to, use a program like ResEdit to determine what the type and creator are for a Macintosh application, then add the extension mapping information to the server using the Server Options command on the Config menu.

***NOTE:** For any new or changed extensions to take effect, you must at least Pause and Continue the File Service on a server.*

Documentation Notes

This section enumerates changes to the information in the *3+Open for Macintosh Administrator's Guide*.

AFP Database

Appendix D, AFP Server Conceptual Overview.

The hidden AFP database directory names have been changed. The directory name ~AFP.DIR is now ~AFP. The directory name ~INF~ is now ~I.

Although each ~AFP is a hidden PC directory (it is inaccessible from a Macintosh workstation), from a PC you can delete the directories and their contents to clean up volumes or their removal as you can any other directories.

NOTE: When you use 3+Open Backup to restore to an empty volume, hidden directories are restored unhidden. To keep these files hidden, traverse all folders after you restore to empty volumes. Use the Find File desk accessory on a Macintosh to search the volume for a nonexistent string, thereby going through all folders.

Configuration File Parameters

This section documents changes to the parameter information currently contained in Appendix A, Configuration File Parameters.

[AppleTalk] section of LANMAN.INI

These two parameters are not previously documented. Use them to reduce the filling of error logs with repetitive low-level error logging.

DETAIL_FREQ=

Range: 0 to 16,535

Default: 100

Determines how often—after the first occurrence, from the time that the AppleTalk stack/router is initialized—each different category of low-level error will be placed in the server error log file. The default value means that the 1st, 101st, 201st, and so on occurrences of each different low level error will be logged. Handles error conditions in the AppleTalk stack that are likely to repeat frequently once they occur.

WARNING_FREQ=

Range: 0 to 16,535

Default: 10

Determines how often—after the first occurrence, from the time that the AppleTalk stack/router is initialized—each different category of warning-level error will be placed in the server error log file. The default value means that the 1st, 11th, 21st, and so on occurrences of each different warning class event will be logged. Handles error conditions in the AppleTalk stack that are likely to repeat a moderate number of times once they occur.

[AFPServer] section of LANMAN.INI

This parameter is not previously documented, but is added during installation.

AUDIT LOGGING=

Range: Yes or No

Default: Yes

Specifies whether audit log entries will be created by the AFP server.

Audit log entries are created when various events occur and information for administrators is considered necessary by the AFP server. For more information about viewing the audit log, see “Auditing” in Chapter 7, *Administering the Server*.

Page-Specific Updates

This section contains corrections to and clarifications of information on specific pages of the *3+Open for Macintosh Administrator's Guide*.

Phase 2 Installation

Pages 2-20 to 2-24.

The instructions for installing the AppleTalk Phase 2 stack/router are incorrect. Correct installation instructions for the AppleTalk Phase 2 stack are in the section "AppleTalk Phase 2" earlier in these release notes.

HELPCOW.MSG

Page 2-49.

The HELPCOW.MSG file is in the root directory 3OPENSERVER\LANMANNETPROG on the *3+Open for Macintosh Server Install #1* diskette. Copy it into the appropriate directory indicated in step 1 on page 2-49.

~AFP

Pages 5-20 and 5-21, and Appendix D.

The hidden file ~AFP.DIR is now ~AFP.

Passwords

Page 6-7.

The information regarding passwords in Table 6-2 is incorrect. Although a LAN Manager password can contain up to 14 characters, a Macintosh password can contain up to 8 standard ASCII characters. Valid 3+Open for Macintosh passwords must contain no more than eight characters.

Alert on Error Parameter

Pages A-3, A-6, and A-8.

The **alert on error** parameter only generates alerts for the “server name not unique” error generated by the 3+Open for Macintosh File Service.

[AppleTalk] section of PROTOCOL.INI, AppleTalk Phase 1 Global Parameters

Page A-20.

REQUESTS_CLIENT=

Range: 0 to 20

Default: 0

When the 3+Open Mail LocalTalk support component is installed, this value is set to 10.

XMITBUFS_CLIENT=

Range: 0 to 40

Default: 0

When the 3+Open Mail LocalTalk support component is installed, this value is set to 10.

Zonenames

Pages A-20, A-26, and A-31.

You do not need to enclose zonenames in quotation marks if they include spaces or begin with a number, as specified. The installation software automatically provides quotation marks around single zonenames. This applies to all *single* zonename parameters: **zone_internal**, **zone**, and **defaultzone**.

NOTE: If you change zonenames while other routers are running, you must shut down the affected router for 10 to 15 minutes before restarting. This allows the other routers associated with the zones to time out and bring zonenames and network numbers into correspondence.

[AppleTalk] section of PROTOCOL.INI, AppleTalk Phase 2 Global Parameters

Page A-28.

REQUESTS_CLIENT=

Range: 0 to 20

Default: 0

When the 3+Open Mail LocalTalk support component is installed, this value is set to 10.

XMITBUFS_CLIENT=

Range: 0 to 40

Default: 0

When the 3+Open Mail LocalTalk support component is installed, this value is set to 10.

[AppleTalk] section of PROTOCOL.INI, AppleTalk Phase 2 Stack Port-Specific Parameters

DEFAULTZONE=

Page A-31.

If you enter **defaultzone** parameters during installation, those parameters are used as default values by the stack for its own initialization. Note also that single zonenames are automatically given quotation marks by the installation software.

NETWORKRANGE=

Page A-33.

The second-to-last paragraph is incorrect. You *can* specify a **networkrange** for a port, as the default range to start up on, in a nonseed Phase 2 situation. Specifying a **networkrange** helps if there is a power failure or if the server is started up before a Phase 2 router.

If you specify a **networkrange**, assign one that is compatible with the range your Phase 2 router is working with, or match the range that the Phase 2 router will assign to the network. This guarantees that whether you start the router before or after the server, you will be able to see the server on the network.

ZONELIST=

Pages A-36 to A-37 and page B-10.

Zonelist is the only parameter that determines whether you are seeding a Phase 2 port or not. Creating zonelists allows users to select the zone in which they plan to work, and in which services reside.

The **networkrange** and **defaultzone** parameters can be used in non-seed situations to permit Macintosh users to continue to see the server even if a router subsequently comes up on the network.

[XNS_NetBIOS] Parameters DISASSEMBLYBUF= and REASSEMBLYBUF=

Page A-38.

Enabling the 3+Open Mail LocalTalk support component sets the **disassemblybuf** and **reassemblybuf** parameters to 8. 3Com recommends that you keep both parameters at maximum values.

ROUTE1= through ROUTE8=

Page A-39.

The second paragraph is incorrect. Even if the **storeforward** parameter is set to null, if the **locator** parameter is set to yes and there is a non-null **route1** parameter, the **route1** parameter will remain in effect. The software assumes it is a valid network number required by the locator. In this situation, an alert appears.

Configuration Tuning and Performance

Two variables affect server memory requirements: the number of users logged on, and the number of volumes open at any given time.

3Com Service Combinations

3Servers with 8 MB system and 2 MB disk cache can support all 3+Open services and all 3+Open for Macintosh components simultaneously.

For a fully loaded system and improved performance, use a 10 MB server and 4 MB disk cache.

Parameter Suggestions

The more memory you can give to the applicable transfer request and buffer-related parameters **maxrequests**, **recvbufs**, **xmitbufs**, and **xferbufs**, the better performance you will see under a heavy load.

All requirements specified in Appendix A, Configuration File Parameters, still apply. For details, see the “LocalTalk NDIS MAC Driver Parameters,” “AppleTalk Phase 1 Stack/Router Parameters,” and “AppleTalk Phase 2 Stack/Router Parameters” sections. Keep in mind the requirements that each driver has. For example, do not set the **xferbufs** parameter higher for LocalTalk ports.

With the addition of Macintosh workstation users accessing 3+Open through an Ethernet port, it may be wise to increase buffering for the affected Ethernet MAC drivers. Check each **bindings** line that contains an Ethernet NDIS MAC driver in the [AppleTalk] section in the PROTOCOL.INI file, and edit the transfer request and buffer-related parameters accordingly. For example, on a 3Server with a built-in Ethernet port, increase the **recvbufs** parameter for increased traffic.

***NOTE:** For information about tuning and configuration of a 3+Open Version 1.1 server, such as new default parameters, see the 3+Open Version 1.1 Maintenance Update Release Notes.*

Troubleshooting

The situations described in this section include descriptions of problems you may run into and actions you can take to remedy them. See the Error Messages section that follows for a listing of specific error messages you may commonly see in server error and audit logs.

***NOTE:** Since 3+Open for Macintosh runs in a network environment, it is advisable to check for viruses occasionally.*

General Troubleshooting

AFP names appear incorrectly in the 3+Open for Macintosh Administrator's Application on an OS/2 workstation.

Meaning: AFP servernames, volumenames, and file longnames are considered to be in the extended Macintosh character set. Because Macintosh and IBM extended characters sets do not coincide on character codes above 127 decimal, their display on an OS/2 workstation may not be exactly what is seen from a Macintosh workstation.

Action: For a side-by-side Macintosh and OS/2 character set comparison, see Table E-3, pages E-11 to E-16, in Appendix E, Name Mapping between 3+Open for Macintosh and OS/2.

A letter has been added to the end of a server's name.

Meaning: If you give a server a name that is identical to one already on the network, a letter is appended to the end of the name to make it unique.

If the 3+Open for Macintosh File Service crashes, the File Service may add "A" to the end of the old servername and restart under the new name. When this happens, users will see both *servername* and *servernameA*. in the Chooser, but only *servernameA* will be useable.

Action: Do not attempt to log into *servername* if you know a problem existed. The workstation network software may hang indefinitely, requiring a reboot.

- To use the server, log into *servernameA*. Do this if the server is fully loaded and you do not want to shut down immediately.

- To remove the duplicate servername if there really is a File Service name conflict on the AppleTalk network, use the 3+Open for Macintosh Administrator's Application to select the server, choose Server Configuration from the Config menu, and change the name of the server.
- If the problem was originally a File Service failure, reboot the server.

Files in ~AFP take up too much space.

Meaning: The OS/2 server file system uses large initial allocation blocks for partitions. Partly due to backwards compatibility with DOS, and partly for improved server performance and less disk fragmentation, Macintosh files in 3+Open for Macintosh require several extra files that do not make use of most of the space in the initial large allocation block.

Action: None. This is a normal situation.

Get error 64: "GetCName: 3NameGateway Name Registration Fails."

Meaning: An administrator has used the Netsetup program on a network with the 3+Open Mail LocalTalk support component installed, and Macintosh workstation users no longer have access to the Name service.

Action: If have the 3+Open Mail LocalTalk support component installed, and you use the Netsetup program *anytime* after you enable the 3+Open for Macintosh Print Service, you must manually insert **appletalk** back into the bindings line of the [XNS_NETBIOS] section of the PROTOCOL.INI file. The line should look like this:

```
bindings = etherlinkII, appletalk
```

“Invalid sharename” is displayed for a volume in the 3+Open for Macintosh Administrator’s Application. Volume is not visible to Macintosh workstation users.

Meaning: A sharename was used when the volume was created. However, the sharename is no longer defined because an administrator has deleted it or rebooted the server without saving the sharename in the profile that is loaded at server startup.

Action: Use the 3+Open for Macintosh Administrator’s Application to add the sharename and path information in the Add/Modify Volume dialog box. For detailed instructions, see page 5-10 in Chapter 5, Configuring Volumes.

Server does not appear in AFP Server list in the 3+Open for Macintosh Administrator’s Application.

Meaning: If a server is running multiple protocols and the workstation’s primary protocol is different than the server’s primary protocol, the server does not appear in the list of servers displayed by the Administrator’s Application.

Action: Type *servername* in the server name field to select a server.

The AFP server suddenly does not respond or has crashed.

Meaning: If the LAN Manager server is not running, the AFP server may stop working.

Action: Do not stop a LAN Manager server with the NET STOP SERVER command without first stopping an active or paused AFP server. Use the 3+Open for Macintosh

Administrator's Application to shut down the File Service so that any sessions will be notified of the pending shutdown. For the sequence of commands to use, see the section "Before Rebooting a 3+Open Server" in these release notes.

Volume user and group databases seem to be lost.

Meaning: If you indicate to the 3SIS program that you want to remove the AFP server or install over an existing server and do not save the server configuration, you will lose existing volume user and group database information.

Action: Save the existing server configuration during a reinstallation. For more information, see the "Reinstallation" section in these release notes.

If you need to manually reconstruct the volume user and group databases, do a NET SHARE. Find the Macintosh volumes that need reconstruction in the comments field. Reconstruct the volume database. You will have to reestablish users' primary groups manually, using the 3+Open for Macintosh Administrator's Application.

You cannot create new folders even though you have the correct privileges to do so.

Meaning: The AFP server permits folders in up to eight levels of directories from the root of a 3+Open server partition.

Action: If new folder creation is being prevented, you have several options:

- Reorganize your folder hierarchy to coincide with the depth limitation of eight levels of directories.

- Create a new volume higher in the server hierarchy if you discover that you have placed it too deep in the hierarchy. Copy the contents of the original volume to the new volume and reassign access privileges. (You must have See Files and See Folders privileges for all folders on the original volume, and Make Changes privileges on the destination volume, to perform the copy). You may want to assign a temporary name to the new volume until the old volume is copied, cleaned up, and deleted.

User Problems

3+Open for Macintosh File and Print Services intermittently appear and disappear in the Chooser.

Meaning: Zones and network numbers are no longer in correspondence.

Action: If you change zonenames, you must shut down the affected routers for 10 to 15 minutes before restarting. This allows remaining routers associated with zones to discard old zone and network number information.

A file has reverted to the default PC icon.

Meaning: This can be caused by renaming the visible data fork of a Macintosh file from a PC workstation. The renamed data fork is considered to be a new PC file by the 3+Open for Macintosh File Service. The 3+Open for Macintosh File Service is not aware of PC workstation activities and therefore cannot adjust the Macintosh filename in response to a rename.

Action: If no resource fork exists, use ResEdit to reset the file's type and creator so Macintosh workstation users can access the file again. If the file had a resource fork, you cannot easily recover it.

Cannot find a file or folder.

Meaning: The user may not have the access privileges necessary to see the file or folder.

Action: The administrator can change volume access privileges using the Administrator's Application. The owner of a folder or volume can check access privileges and reassign privileges to include the user or group.

Cannot find a server.

Meaning: Something may be wrong with the cable system between the workstation having the problem and the server.

Action: Before proceeding to the steps that follow, make sure the network connection, layout, and cable termination conform to the specifications of the cable system you are using. See the appropriate cable system documentation for assistance.

Then use this procedure to find the location of the problem:

1. Start with the workstation having the problem.

If the cable system is LocalTalk, check to see that the LocalTalk connector box is firmly attached to the printer port on the back of the Macintosh workstation.

If the cable system is not LocalTalk, check that the network connector is securely connected to its port.

2. Determine whether other workstation users are having the same problem.

If they are, check the cables and connections at the server, and check that the server is operating properly. If the server is not the source of the problem, proceed to step 3.

3. Check for breaks in the cable system.

If the missing server is on a local network, check each workstation between the problem workstation and the server until you find the server in the Chooser. The break in the cable system is between the workstation that shows the server in the Chooser and the one that does not.

If the missing server is on a different network in the internet, use your router seeding plan and server database to determine which workstation is the first one beyond the router that links the two networks. Test that workstation, then each workstation beyond it, in the direction of the server, until the server appears in the Chooser.

If the server was visible at the first workstation, work backwards toward your own network, testing the workstation adjacent to each router until the server fails to appear in the Chooser. Then isolate the break by testing the workstations on this network.

4. When you have isolated the network break, check the network cables and connections at that location to make sure all are securely fastened, and try once again to display the server in the Chooser.

If necessary, try replacing cables or connectors.

Cannot log off.

Meaning: AppleShare® has no logout capability.

Action: A user should log off from a server by dragging all linked volumes from the same server to the trash.

Warn users not to deactivate AppleTalk in the Chooser, reactivate, and log in as a different user.

Cannot retrieve mail attachments reliably.

Meaning: The Macintosh workstation user is trying to use a mailbox stored on a 3+ server over LocalTalk.

Action: Do not let users use a mailbox on a 3+ server . They should store mailboxes only on a 3+Open for Macintosh server or a local hard disk.

Cannot see a switch-launch volume.

Meaning: Volume is not configured for switch-launching or user does not have correct access privileges.

Action: Configure a private volume for switch-launching: make the user the owner of the volume, and give access rights to only that user. For instructions, see Chapter 5, Configuring Volumes.

Note that, even when a volume is correctly configured for switch-launching, the Finder does not display the small Macintosh icon on the volume's System Folder.

Cannot see a volume from a Macintosh workstation.

Meaning: Private volumes can only be seen by the volume's owner.

Action: Use the Administrator's Application to check the ownership of the volume in question.

Cannot use 3+Mail.

Meaning: A user with an EtherTalk 2.0 driver (AppleTalk Phase 2 only) and 3+Open for Macintosh has not installed version 1.6 of of the 3+Mail CP file.

Action: 3+Mail for Macintosh must be upgraded before it can be used with an EtherTalk 2.0 driver (AppleTalk Phase 2 only) and 3+Open for Macintosh. Affected Macintosh network users should install version 1.6 of the 3+Mail CP file in the System Folder on their startup disk, and in the System Folder on a switch-launch volume.

Desk accessories do not work under MultiFinder on a switch-launch volume.

Meaning: The workstation is running Macintosh System software version 6.0.5, which does not allow desk accessories, MultiFinder, and switch-launching to work concurrently. Desk accessories and switch-launching work fine under the Finder in System 6.0.5.

Action: The user can take one of two actions:

- Remove the MultiFinder file from the System folder on the network volume used for switch-launching. The switch launch process will automatically launch into the Finder, where the desk accessories work properly.

- Start up the desired desk accessory by pressing and holding the Option key while selecting the desk accessory from the Apple menu. This method allows the user to continue to work under MultiFinder.

Do not see blinking 3+ next to the Apple icon.

Meaning: When 3+Mail CP to version 1.6 is installed, 3+Open for Macintosh users do not see a blinking 3+ next to the Apple icon on the menu bar.

Action: None.

View of folder or volume does not match View menu selection.

Meaning: A bug in the finder occasionally causes a discrepancy between the view selected in the View menu and the actual view displayed for a folder or volume.

Action: The folder or volume owner must select a view to correct the discrepancy. The view selected by the owner then remains in effect. No one other than the owner of a folder or volume can select a view to correct the discrepancy.

Guests are unable to access volumes supposedly open to everyone.

Meaning: The access privilege Everyone applies only to the group Users *until* the **guestaccount** and **guestgroup** parameters are enabled. When you were configuring volumes, you gave Everyone privileges to shared volumes before you enabled guest login.

Action: The administrator must:

- Save volume access privileges *after* the server has been restarted with guest accounts enabled.

- Edit and save the [AFPServer] section of the LANMAN.INI file with **guestaccount** and **guestgroup** parameters specified *after* guest user and guest group accounts are set up. For information on setting up guest login capability, see page 6-13 in Chapter 6, Managing Users and Groups.

The owner must update all volume and folder access privileges.

PC users cannot see contents of folders.

Meaning: A volume or folder owner has created new folders with incorrect AFP privileges.

Action: Owners must give both See Folders and See Files access privileges to enable PC users to see the contents of folders and volume root directories.

Shared file access not working.

Meaning: Shared file access does not work when an OS/2 workstation user attempts to access a file from the concurrent server's workstation. Byte-range locking (found in multi-user databases) does not work correctly for programs running from a concurrent workstation on a concurrent server.

Action: Make sure all OS/2 workstation users do *not* use concurrent servers as workstations if they plan to share files using programs that perform byte-range locking.

Switch-launch user has trouble restarting after a system crash.

Meaning: The 3+Open for Macintosh File Service times out a workstation session that appears unresponsive, and closes all open files. There is a delay of about three minutes if a switch-launched Macintosh workstation crashes for any reason (for example, when an application has a bug that causes a system bomb).

Action: You can accelerate the process by terminating the session via the Administrator's Application.

Trouble logging into a 3+network.

Meaning: There are a number of possible meanings:

1. Macintosh users with 3+Mail for Macintosh *may* need to use the Chooser to select a zone—containing a server on which the 3+Open Mail LocalTalk support component is installed—in order to use the Name service with 3+Open Mail. This depends on network organization and whether multiple zones are present.
2. A user with an EtherTalk 2.0 driver (AppleTalk Phase 2 only) and 3+Open for Macintosh does not have version 1.6 of of the 3+Mail CP file installed.
3. Cable connections may be loose.
4. Servers may be down.

Action: For the first problem, administrators can make the use of 3+Mail for Macintosh easier through zone assignment. See “Working with Multiple 3+Open Mail LocalTalk Support Installations” earlier in these release notes.

For the second problem, see the troubleshooting description “Cannot use 3+Mail” above. For the third problem, see the troubleshooting description “Cannot find a server” below. For the fourth problem, users should try again later.

User has forgotten password.

Meaning: You cannot retrieve a password, but you can replace it.

Action: Use the Administrator’s Application to enter a new password.

User needs to see actual volume space available.

Meaning: 3+Open for Macintosh shows the server partition space available, not volume space, in the Finder.

Action: If a user needs to determine actual volume space available, the user can create a folder in the root of the volume and put all the volume’s contents in that folder. Then if the user selects the volume and chooses Get Info, the user will see the actual space used in the volume.

***NOTE:** If the volume has any 8-level deep hierarchies already, the user may have to perform Get Info commands on those folders separately.*

Printing Problems

Cannot access PostScript printer in the Chooser.

Meaning: A Macintosh user cannot find the PostScript printer in the list of resources the server is sharing with the network.

Action: You may need to correct some information entered when the printer queue was created.

- Check the string in the Remarks field to make sure it conforms to the list in Table 2-2, page 2-41, in Chapter 2, Installing 3+Open for Macintosh.
- If the exact number of users is defined in the Max users field, the Print Service shuts down when that limit is reached. It is best to leave the Max users field set on “No limit”; if you enter a number in the field, it must be the number of users plus one (n+1). You must always increase the actual number of users by one.

Cannot distinguish printer and server names.

Meaning: Not every server has to have both Macintosh File Service (AFP) and Macintosh Print Service installed, so you cannot assume that the printer name can take an AFP server name.

Action: Give printers distinguishable names during installation.

Consistent print error messages appear.

Meaning: Under some circumstances a printer can get into a state where errors occur for all print jobs.

Action: Reset the printer: turn it off, then on again.

Dictionary missing and the job does not print.

Meaning: The **dictionary** parameter in the [MacPrintService] section of the LANMAN.INI file is inconsistent with LaserWriter® software installed on a Macintosh workstation.

Action: Macintosh workstation users must update to use the correct version of LaserWriter software to coincide with the

version on the server. Version 5.2 is specified by the LWPREP.68 file; version 6.0 (the color version) is specified by the LWPREP.70 file.

File does not print.

Meaning: Certain control characters embedded in a file may hang the printer. [Ctrl]+C, [Ctrl]+D, [Ctrl]+Q, and [Ctrl]+S are known culprits. The PostScript error, "Offending command" appears.

Action: The user should make a *copy* of the file. Then select the whole file, change the font to Chicago, and look for square boxes. They indicate suspicious characters. **Delete** the square boxes and try printing the file again.

PostScript error "Offending command" appears at end of print job.

Meaning: Canceling a print job in the middle of spooling from a Macintosh workstation may cause this error to be printed at the end of the canceled printout. This occurs more often when the print job includes a font downloaded from the Macintosh workstation.

Action: None. Macintosh workstation user can print the job again when ready.

Print job fails on one of multiple print queues.

Meaning: A print job has failed on one of the print queues with "Error on Nul" because the paper cassette is empty or the printer is turned off. In this situation, with multiple print queues assigned to multiple communication ports (1 queue per port), the print jobs in other print queues will not be printed.

Action: As soon as the problem is fixed (paper is added, for example), the despooler resumes printing from all queues.

Print messages in error or audit logs.

Meaning: When messages appear *immediately* after you set up a print share, the mapping to the PPD (PostScript Printer Definition) file may be incorrect.

Action: You may need to correct some information entered when the printer queue was created. Check the string in the Remarks field to make sure it conforms to the list in Table 2-2, page 2-41, in Chapter 2, Installing 3+Open for Macintosh.

Printer cannot access extra printer fonts.

Meaning: Macintosh users are getting messages that the printer is creating bitmap versions of resident fonts. The printer is not using all the resident fonts.

Action: You must edit the PPD (PostScript Printer Definition) file directory for a printer, based on instructions from the printer manufacturer. See the documents that came with your printer.

You must add the fonts to the PPD file so that 3+Open for Macintosh Print Service can be aware of whatever resident fonts you have. For example, for a LaserWriter NTX with an SCSI disk drive for extra fonts, you would edit LWNTX470.PPD in the **ppd file directory** parameter in the [MacPrintService] section of LANMAN.INI. The path that is set up on installation is:

```
c:\3open\server\lanman\services\macps\ppd
```

For more information on the **ppd file directory** parameter, see page A-8 in Appendix A, Configuration File Parameters.

Printer is not printing queued jobs.

Meaning: If the server has not been rebooted after you run Netsetup, or if there is a comma in the parameters field of the print queue, spooled print jobs may not be printed.. A message indicates that the output device cannot be opened.

Action: Check the Net Admin Printing Options for Queue parameters field to make sure that the line contains no comma. It should read

```
physdev=COM1 sepfile=PSSCRIPT.SEP
```

For instructions for creating and sharing a print queue, see page 2-38 in Chapter 2, Installing 3+Open for Macintosh. Also make sure you reboot the server after running Netsetup and making any changes.

Trouble printing large graphic documents or bitmaps, and running out of disk space for the spool file.

Meaning: Despooling on a serial cable does not work with one application setting in the Page Setup dialog box, File menu.

Actions: Users should check the Page Setup options. Administrators should check the space in the default spool directory.

- In the LaserWriter Page Setup dialog box, the user should turn off the “Faster bitmap printing” option. (If the application is Hypercard™, the option is called “Faster laser printing.”)
- If the default spool directory of a 3Server does not contain enough space, put the spool directory on a different logical drive or partition from the default. For more information on the `spooldir` parameter, see page A-13 in Appendix A, Configuration File Parameters.

Trouble printing PageMaker files.

Meaning: Aldus PageMaker sends its own PostScript dictionary to the printer in order to print. When that dictionary is left permanently loaded on the printer, it causes memory problems.

Action: Edit the APD (Aldus PostScript Dictionary) file so the Aldus dictionary will be downloaded temporarily, as part of the normal job stream, rather than permanently. Then distribute a copy of the edited file to each Macintosh workstation user.

To edit the APD file, remove the lines:

```
@ExitServer: "serverdict begin exitserver"  
@Password: "0"
```

Edit the following line to read:

```
@AllowVMQuery: "false"
```

All Macintosh workstation users printing PageMaker documents on 3+Open for Macintosh must install the edited file.

You are reinstalling the Macintosh Print Service for LaserWriter version 6.0.

Meaning: When you reinstall the Macintosh Print Service for a LaserWriter file different from the one currently in use, with active PostScript printers attached to the server, you must reset those printers. This is because the old dictionary

is downloaded in the printers. (Because fonts are associated with printer types, you do not need to do anything to the PPD file when you reinstall the Print Service.)

Action: Reset the printers after you reinstall and enable the Macintosh Print Service. Turn each attached printer off, then on again.

Large Network Problems

If you are running a large number of LAN Manager servers on your local network, and that number exceeds the maximum allowed sessions on your workstation's primary protocol (the default number of sessions is 32), you could experience the following problems when you use the AFP Servers dialog box in the 3+Open for Macintosh Administrator's Application:

You cannot view or select some AFP servers that are on the network. When you type the servername in the AFP Servers dialog box and choose Select, you get a "NetBIOS session limit exceeded" error if you have run out of sessions.

The error log on your workstation contains NCB errors indicating a session could not be established on the target server.

You cannot create a directory on the currently selected server when adding a new share for an AFP volume.

You cannot create a LAN Manager user home directory on the currently selected server when adding or modifying a user account.

You cannot read the LANMAN.INI file on the currently selected server when generating a server report.

Meaning: These problems may be due to running out of available sessions on your workstation after using the AFP

Servers dialog box. (They also may have other causes, like no Admin privileges.)

Action: There are several ways to alleviate the lack of available sessions.

- You do not need to use the AFP Servers dialog box to select a server. Instead, type `macadmin \\servername` on the command line to select a server.

If you use this approach, you must reenter the 3+Open for Macintosh Administrator's Application each time you want to select a different server.

- Concurrent servers are automatically selected when you start the Administrator's Application and thus do not require using the AFP Servers dialog box.
- Each protocol stack has parameters that allow you to configure the number of sessions. Modify the parameters appropriate to your primary stack.

You can modify the `net1` parameter in the LANMAN.INI file to expand your primary protocol's configured number of sessions to be greater than the number of visible LAN Manager servers on the local network. Since the optional `net1` parameter `sessions` has a default of 32, you should increase it if you have more than 32 servers. The `net1` parameter overrides the `maxsess` parameter.

You should also modify your PROTOCOL.INI session parameter for your primary protocol stack, if one exists, to the same number as in LANMAN.INI.

Another LANMAN.INI parameter that you might want to modify is `keepconn` (the OS/2 default is 600). Lowering this parameter will cause the sessions established through the AFP Servers dialog box to terminate more quickly,

thus preventing the latter three conditions listed above (where you cannot create directories or read the LANMAN.INI file) from occurring.

Bad Password Audit Log Entries

If you are seeing a significant number of bad password audit log entries on other LAN Manager servers on the local network, they may be caused by access privilege conflicts.

Meaning: Macintosh Administrators who use the AFP Servers dialog box could cause bad password errors to be generated. This is because the Administrator's Application must perform a logon to each visible LAN Manager server to determine if the AFP server is running there.

If the administrator you are logged in as is unknown on the other LAN Manager servers, the logon will be converted to a guest login. If a LAN Manager server does not allow guest logins, this will result in a bad password error being written to the audit log and, after so many occurrences, an alert may be generated.

Action: There are several ways to avoid bad password errors:

- Add all Macintosh administrators as Admins on all LAN Manager servers. Then as long as the Macintosh administrator is correctly logged in, the administrator can establish a session with any LAN Manager server.
- Have all visible LAN Manager servers allow guest logins. To allow guest logins to a LAN Manager server, you must make sure that the LANMAN.INI **guestaccount** parameter in the LAN Manager [server] section is set to an existing and enabled guest account on

that server; that account must not have a password. If you do not want to get these errors and you do not want to allow guest logins on certain servers, you can convert those servers to hidden LAN Manager servers.

- You do not need to use the AFP Servers dialog box to select a server. Type `macadmin \\servername` on the command line to select a server. Doing this requires that you reenter the Administrator's Application each time you want to select a different server. Also, concurrent servers are automatically selected when you start the Administrator's Application, and thus do not require using the AFP Servers dialog box—except to pause, continue, or stop the File Service.

Installation Problems

The default server owner (Admin) is not a valid account.

Meaning: Admin may have been removed from the LAN Manager list of valid accounts. You only see this problem listed in the error log after you choose the OK command button on the Server Options dialog box.

Action: Because 3+Open for Macintosh makes Admin the default server and volume owner, Admin must be a valid account, or a different account must be given ownership. Use the Server Options command on the Config menu in the Administrator's Application to change the default owner to a real user on the server.

Server appears in Chooser, then disappears.

Meaning: Two networks have been given duplicate network numbers. The first server to be booted works fine. When the second server is booted, it appears in the Chooser on one

Macintosh workstation, then disappears and appears in the Chooser on a different workstation. The order of appearance is unpredictable.

Action: Do *not* use duplicate network numbers. If two networks have been given duplicate network numbers, reassign numbers by editing the [AppleTalk] section of the PROTOCOL.INI file on the appropriate server, and reboot.

You cannot access the target server.

Meaning: You must have 3+Open LAN Manager administrator (Admin) permission on the server you wish to administer. (There may be other causes, such as the workstation's primary protocol being different than the server's primary protocol, that keep the server from appearing in the AFP Server list.)

Action: Be sure you are using an account that has administrator permission and that your password is correct. Check your account and password in the Administrator's Application, or type

```
net use \\servername\admin$
```

to verify that you really have Admin privileges on the server in question.

You do not see the target server you expected to see after installation.

Meaning: Since the 3+Open for Macintosh Administrator's Application allows you to see any server that allows guest logins, there may be a configuration problem. (There may be other causes, such as the workstation's primary protocol

being different than the server's primary protocol, that keep the server from appearing in the AFP Server list.)

Action: Check the error log for messages indicating a configuration problem. Macintosh workstation users should check other zones; the server may be in a different zone.

AFP Server Errors

This section lists some common, low-level stack errors that are informational in nature.

NOTE: Keyword parameter warnings, including out-of-range parameters for the AppleTalk stack, will not appear in the Error log before the workstation is started on the server.

AFPSRVR Startup NBPRegister error: 17...terminating InitializeRouter, Can't start the bridge on less than two ports

Meaning: This entry is generated in the error log when an illegal network number has been entered during AppleTalk Phase 1 stack/router installation.

Action: Reinstall the AppleTalk Phase 1 stack/router, or fix the network number in the [AppleTalk] section of PROTOCOL.INI. For information on assigning a network number, see page B-17, Appendix B, AppleTalk Router Concepts and Internet Planning.

AFP "Miscellaneous error"

Meaning: Attempting to rename an AFP volume while it is in use by a Macintosh user will produce this error in the log.

Action: Do not attempt to zoom and rename volumes in use by a Macintosh user.

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