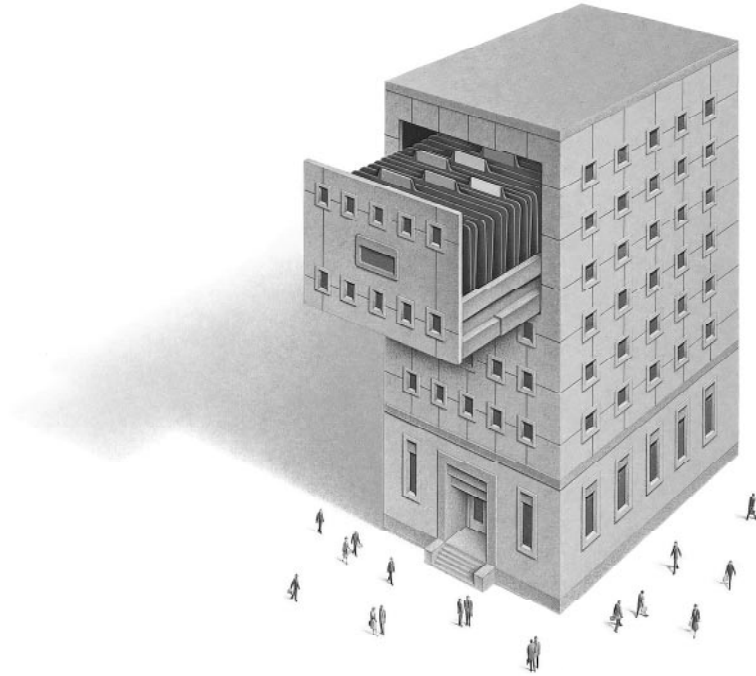


F O R M A C I N T O S H A N D W I N D O W S



FileMaker^{PRO} SDK

DEVELOPER'S GUIDE

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Claris Corporation
5201 Patrick Henry Drive
Santa Clara, California 95052

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Chapter 1: Welcome to FileMaker Pro SDK

This chapter introduces the FileMaker® Pro Solutions Distribution Kit (SDK). It provides a brief introduction to the terms used in this guide and the requirements for running the FileMaker® Pro Binder application on your system.

Note This guide covers both the Apple Mac™ OS computer and Windows versions of the FileMaker Pro Binder application. Some of the screen examples are from the Macintosh® version and others are from the Windows version, so you may see slight variations in the screens.

About FileMaker Pro SDK

The FileMaker Pro SDK package includes FileMaker Pro Binder, an application that creates the FileMaker® Pro Runtime application, then binds it to your solution files. The runtime application allows end-users to use your solution files without having the FileMaker Pro application.

You create a bundled solution consisting of the runtime application and the solution files. The runtime application is a modified version of the FileMaker Pro application. Some database design features have been removed or hidden and some menu items have been removed. See Appendix A for a list of the menu commands available in the runtime application.

New features

Here are the new features available in FileMaker Pro 3.0 SDK.

KioskMaker

The KioskMaker™ feature allows the runtime application to perform without the appearance of operating system interface elements. Like a presentation or slide show, the menu bar and menu choices disappear and the screen is taken up with the primary file interface that you design in FileMaker Pro 3.0. KioskMaker is perfect for:

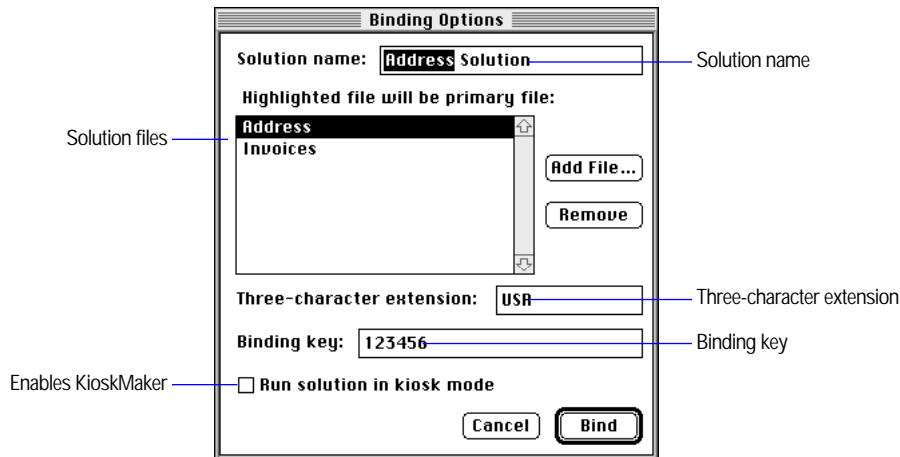
- running your solution files in a retail store, similar to a bookstore directory or wedding gift registry database
- setting up a self-running demonstration or survey

- removing access to the operating system while the runtime application is in use

See “Using KioskMaker” on page 3-10 for information and design tips.

Assigning the three-character extension

While binding, you assign a three-character extension to your solution files and the FileMaker Pro Runtime application. The extension associates your solution files with the FileMaker Pro Runtime application, making your solution files more identifiable. On the Macintosh, a character is added to the three-character extension to become the creator type.



The Binding Options dialog box

Changes from FileMaker Pro 2.1 SDK

The FileMaker Pro Binder application is now a binding utility; you first develop your solution files using FileMaker Pro 3.0. Then you bind them using FileMaker Pro Binder, which generates the FileMaker Pro Runtime application and associates all your solution files.

SDK terminology

This guide uses the following terms:

Term	Refers to
FileMaker Pro application	The standard version of the FileMaker Pro application
FileMaker Pro Binder	The application that generates the FileMaker Pro Runtime application and binds it to your solution files
FileMaker Pro Runtime application	The runtime engine you distribute with your solution files
Solution files	Your primary file and any auxiliary files
Primary file	The main database file for your solution
Auxiliary file	Any additional files, such as import files and relational files
Bundled solution	Your solution files, the FileMaker Pro Runtime application, and additional support files such as DLLs on Windows, optional data and graphic file filters, spell-checking software, and networking support files
Bind	The process of creating the FileMaker Pro Runtime application and linking it to the solution files
Binding key	A code used when binding the solution files to the FileMaker Pro Runtime application. The key internally links the solution files with the application.
Three-character extension	Associates solution files with the FileMaker Pro Runtime application
KioskMaker	Gives your solution files a unique interface by hiding operating system elements and FileMaker Pro standard menus and commands

Understanding the license agreement

The FileMaker Pro SDK license agreement allows you to distribute the FileMaker Pro Runtime application with your solution, provided you adhere to the following conditions:

- You cannot alter or remove any of the trademarks.
- You must provide appropriate documentation for your bundled solution and you must provide *all of the end-user technical support*.
- You must distribute a simple license agreement with your bundled solution. (See the sample license agreement in the Sample folder in the Tools folder on the CD-ROM disc.)

- You may not use the Claris® name or logo to market your bundled solution.
- You must provide an “About” layout that includes your name and the telephone number for your technical support (see “Creating an “About” layout” on page 3-4).

Getting customer support

To learn about Claris Technical Support and Claris Customer Assistance, their hours of operation, and their telephone numbers, see the *Claris® Service Directory* included in the product package.

Take a minute to complete and mail the postage-paid product registration card for your new software, or call (800) 356-6657 to register by phone. Keep the part of the card with your serial number on it in a safe place.

What's on the CD-ROM

The FileMaker Pro 3.0 SDK CD-ROM contains both Windows and Macintosh files. The following table lists the contents of the CD-ROM.

Location	Description	Use to
FileMaker Pro 3.0 SDK Macintosh		
FileMaker Pro 3.0 SDK folder	Contains FileMaker Pro Binder and Runtime Files folder	Bind solution files and distribute Runtime Files folder to enable optional functionality
Runtime Files folder	Contains Files for System Folder and FileMaker Extensions folders	Install to enable optional FileMaker Pro functionality, like spell-checking, data and graphics importing, and networking
Support folder	Contains Cross Platform Tips, CSA Guide, and TechInfo CD Sampler folders	Browse technical and reference information
Tools folder	Contains the FM Tools, Examples, Sample SDK Solution, and Kiosk Sample Solution folder	Browse sample database files, tools, and bundled solutions for your use

Location	Description	Use to
FileMaker Pro 3.0 SDK		
Windows		
FMP30SDK folder	Contains FMBINDER.EXE and the Runtime folder	Bind solution files and distribute Runtime Files folder to enable optional functionality
RUNTIME folder	Contains the SYSTEM and the 4WINSYS folders	Install to enable optional FileMaker Pro functionality, like spell-checking, data and graphics importing, and networking
WIN32S1.30C folder	Enables FileMaker Pro to run on Windows 3.1 and Windows for Workgroups	Install on end-user machines running Windows 3.1 or Windows for Workgroups 3.11
SUPPORT folder	Contains XPLAT, CSAGUIDE, and TECHINFO folders	Browse technical and reference information
TOOLS folder	Contains the FM_TOOLS, EXAMPLES, SAMPLE, and KIOSK folders	Browse sample database files, tools, and bundled solutions for your use

Chapter 2: Installing FileMaker Pro SDK

This chapter provides instructions for installing the FileMaker Pro Binder application on your system.

What you need

To run FileMaker Pro Binder on the Macintosh, you need the following minimum equipment and software:

- any Macintosh, Power Macintosh,[®] or compatible computer running System 7 or newer (System 7.1 or newer recommended)
- a hard disk with 4 MB of RAM (8 MB RAM recommended)
- a CD-ROM drive
- solution files developed in FileMaker Pro 3.0

Claris recommends using the latest update to the operating system, which is available from Apple Computer, Inc. Updates to system software can be obtained from the Apple World Wide Web site.

To run FMBINDER.EXE on Windows 95 or Windows NT, you need the following minimum equipment and software:

- an Intel compatible 486/33 PC
- a hard disk with 8 MB of RAM (16 MB RAM recommended with Windows NT)
- a CD-ROM drive
- solution files developed in FileMaker Pro 3.0

To run FMBINDER.EXE on Windows 3.1 or Windows for Workgroups 3.11, you need the following minimum equipment and software:

- Win32s 1.30c, available on the CD-ROM disc or from Microsoft
- Intel compatible 486/33 PC
- a hard disk with 8 MB of RAM
- a CD-ROM drive
- solution files developed in FileMaker Pro 3.0

What end-users need

To distribute the FileMaker Pro Runtime application on floppy disks, you need to purchase a compression utility or installation program, which stores the runtime application and bound solution files on several disks. Your end-users will need the instructions and software to decompress the files on their hard disks.

To run FileMaker Pro Runtime on the Macintosh, your end-users need the following minimum equipment and software:

- any Macintosh, Power Macintosh, or compatible computer running System 7 or newer (System 7.1 or newer recommended)
- a hard disk and 4 MB of RAM (8 MB RAM recommended)

Claris recommends using the latest update to the operating system, which is available from Apple Computer, Inc. Updates to system software can be obtained from the Apple World Wide Web site.

To run FileMaker Pro Runtime on Windows 95 or Windows NT 3.5.1, your end-users need the following minimum equipment and software:

- an Intel compatible 486/33 computer with 8 MB of RAM
- a hard disk

To run FileMaker Pro Runtime on Windows 3.1 or Windows for Workgroups 3.11, your end-users need the following minimum equipment and software:

- Win32s 1.30c, available on the CD-ROM or from Microsoft
- Intel compatible 486/33 computer with 8 MB of RAM
- a hard disk

Networking solution files

If your solution will be run over a network, you'll need to distribute the FileMaker Pro networking files available on the CD-ROM. Your end-users must have the client networking software installed correctly.

Use the following chart to determine what client networking software your end-users need to use FileMaker Pro Runtime over a network.

To use this network	On this operating system	Networking software necessary
AppleTalk®	Macintosh	Included in operating system
IPX/SPX	Macintosh	MacIPX application program 1.2.1 or later (included on CD-ROM)
TCP/IP	Macintosh	MacTCP® 2.0.6 (included with System 7.5 or later) or Apple Open Transport 1.0.8 or later (included with System 7.5.3)
IPX/SPX	Windows 95	Included in operating system
IPX/SPX	Windows NT	Included in operating system
IPX/SPX	Windows for Workgroups and Windows 3.1	Novell NetWare Client Software Shell 3.26 or later, available from Novell
TCP/IP	Windows 95 and Windows NT	Included in operating system
TCP/IP	Windows for Workgroups	MS TCP/IP-32 version 3.11b, available from Microsoft

See “Additional files required for networked solutions” on page 5-4.

Copying FileMaker Pro Binder

To install FileMaker Pro 3.0 SDK, copy the FileMaker Pro Binder application to your hard disk.

Copying FileMaker Pro Binder on the Macintosh

Drag the FileMaker Pro 3.0 SDK folder to your hard disk. You will move both the binder application and the Runtime Files folder, which contains networking modules and file filters, to your hard disk.

Copying additional files on the Macintosh

The Support folder includes cross-platform tips, the TechInfo Sampler, and additional reference information. The Tools folder contains sample FileMaker Pro SDK files and tools to use in your solution files. Copying the additional files is optional. To save space, you might want to read the files from the CD-ROM disc without copying them to your hard disk.

To copy the additional files, drag the Support and/or Tools folder to your hard disk.

Copying FMBINDER.EXE on Windows

Copy the FMP30SDK folder over to your hard disk. You will move both the binder application and the Runtime folder, which contains networking modules and file filters, to your hard disk.

Copying additional files on Windows

The Support folder includes cross-platform tips, the TechInfo Sampler, and additional reference information. The Tools folder contains sample FileMaker Pro SDK files and tools to use in your solution files. Copying the support files is optional. To save space, you might want to read the files from the CD-ROM disc without copying them to your hard disk.

To copy the additional files, drag the Support and/or Tools folder to your hard disk.

Important When copying files from the CD-ROM, you will need to change the file attributes so the files are not read-only format. To change a file's attributes in Windows 95, select the files that you want to modify and choose Properties from the File menu. Disable the Read Only checkbox to make modifications to the file. To change a file's attributes in Windows 3.1, select the files that you want to modify from the File Manager and choose Properties from the File menu. Disable the Read Only checkbox to make modifications to the file. This is not necessary if you copy the files from DOS or from a Macintosh computer.

Chapter 3: *Preparing solution files*

This chapter describes how to prepare your solution files before binding. It covers what to do after you've developed a solution and includes tips for developing a solution using KioskMaker. It also describes how to convert an existing FileMaker Pro 2.x SDK solution file to a FileMaker Pro 3.0 SDK solution.

Note This guide assumes you're familiar with FileMaker Pro and have developed database solutions. For specific explanations of the FileMaker Pro application functionality, refer to the user's guide that comes with the FileMaker Pro 3.0 application.

Preparing a solution—an overview

In preparing your solution files, you should implement the following:

- an “About” layout to introduce your solution
- a customized Help system
- scripts/buttons to open and close auxiliary files
- passwords to protect your solution

Here are some suggestions for the general steps to follow in preparing your solution files:

1. In FileMaker Pro 3.0, design the files that make up your solution.

If you're developing a solution that runs on both Macintosh and Windows, make sure you follow all platform-specific rules, such as naming conventions. See the Cross Platform Tips (XPLATTIP on Windows) file in the Support folder for information. If you're converting solution files from FileMaker Pro 2.x, see “Converting and upgrading solution files” on page 3-12 for information.

2. Add an “About” layout.

You should name your layout “About <solution name>.” You can include your name, address, and technical support phone number on the layout—you are responsible for providing technical support for your bundled solution. If you don't provide that information in the “About” layout, make sure it appears in your supporting documentation. See “Creating an “About” layout” on page 3-4 for design tips.

3. Create a Help system to provide help on your solution.

The Help files contained in the FileMaker Pro application are not available with the FileMaker Pro Runtime application. Claris recommends you create a Help layout or database integrated in your solution files. There is a sample integrated Help system included in the Sample Solution folder (SAMPLE folder on Windows) inside the Tools folder on the CD-ROM. To access the sample help database layouts, the solution files must be opened in FileMaker Pro 3.0.

4. Bind the primary and auxiliary files.
5. Test your solution for errors.

Make sure your solution does not use a standard feature that is hidden or disabled in FileMaker Pro Runtime. Go through your solution trying every option, feature, and button. See appendix A, "FileMaker Pro Runtime features," for a list of the menu commands available in FileMaker Pro Runtime.

If you're running your solution files using KioskMaker, be sure to test all your scripts carefully. Remember that menu commands and key equivalents are disabled, so the only way to close your solution or access FileMaker Pro menu commands is from a button on the layout. If the solution needs to be closed, place a Quit button on an accessible layout. Be sure to test the files in kiosk mode on a similar sized monitor to verify window placement.

Test your solution on both Macintosh and Windows machines if it is a cross-platform solution.

6. Develop the installation procedure for your solution files. FileMaker Pro Runtime does not come with an installer. You will need a utility to compress and install the files on your end-user's machine if you're distributing the bundled solution on floppy disks.

Things to consider before you begin

Here is a list of things to consider and decide as you develop your solution. Claris recommends that you address these issues before binding the solution. However, you can make adjustments after binding.

- Will the bundled solution be run on a network?

If the solution will always run on a network, set the files to Multi-User before you bind the solution. If the file will be networked occasionally or you're not sure if the solution will be networked, create scripts to change the file from Single-User to Multi-User and back.

Create a script using the new Open Preferences script step to enable end-users to select their network protocol.

- Do you want your end-users to open and close auxiliary files?

In the FileMaker Pro Runtime application, several menu options have been eliminated, including Open and Close. If you want your end-user to open and close auxiliary files, you must provide scripts in your solution to perform these operations.

- Are you running your files in kiosk mode?

If your solution files will be run in kiosk mode, the entire interface must be accessible via buttons on the layouts. FileMaker Pro menus and menu commands are not available, so you must create scripts to perform menu commands, such as creating new records, sorting, and even closing the solution files. Include a Quit button if the file needs to be closed.

- Is this a cross-platform solution?

It is safe to follow DOS naming conventions, which limit the filename to up to eight characters, followed by a period and your three-character extension (for example, SAMPLE.USR). If you rename solution files, be sure to reset all relationships, value lists, and scripts to locate the renamed file. The Cross Platform Tips file (XPLATTIP on Windows) in the Support folder has more tips on cross-platform issues, including layouts, color palettes, printing, and character sets, among others.

Important If you are changing the three-character extension on Windows, you must first bind solution files on Windows, then on the Macintosh.

- How will you provide updates for your end-users?

Plan ahead for the time you may want to update your solution files. You can make the process easier for your end-users by providing scripts in your primary file to export and import their data. See “Importing to the new solution file” on page 3-14 for sample conversion steps.

- Which printers will your end-users have?

It’s a good idea to set document margins in FileMaker Pro 3.0 if your solution will be printed from a variety of printers.

Claris recommends You should password protect solution files before binding. This protects the file in case an end-user opens your solution with the FileMaker Pro application. Without password protection, your end-user can print or modify your scripts and field definitions, and make modifications to your solution. See “Using passwords” on page 3-9 for more information.

Creating an “About” layout

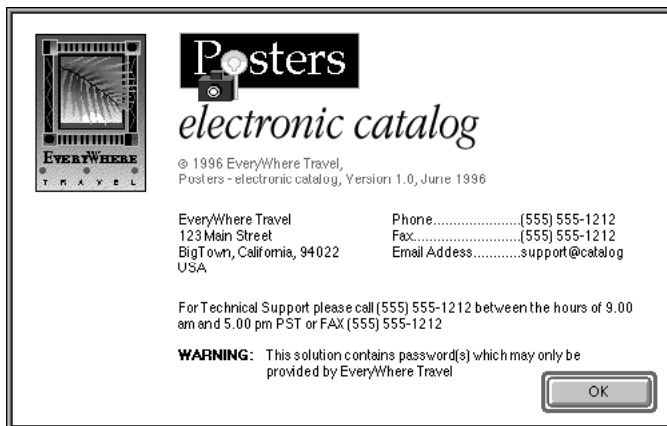
The FileMaker Pro application splash screen doesn't appear when the end-user launches your bundled solution. You should create and display your own “About” screen using a layout in your primary file.

Claris recommends Title the layout “About <solution name>.” Include your logo, name, address, and the telephone number you are using for technical support. This allows Claris Technical Support to identify your solution if it is sent to us for repair or password removal.

To create an “About” layout:

1. Start with the layout in the Posters solution in the Sample Solution folder (SAMPLE on Windows) in the Tools folder or create your own layout.

Substitute your logo, solution name, and support information



2. Include your logo or any other graphics and text.

You can include your company name, address, the product name, and a phone number your end-users can call for technical support.

3. Make sure the “About” layout includes a button that lets your end-user return to the original layout.
4. Do one of the following:
 - Write a script that displays the layout each time the end-user starts the bundled solution.
 - In FileMaker Pro 3.0, select Preferences from the Edit menu. In Document Preferences, set the Switch to layout option for the primary file. Select the “About” layout as the layout that appears first.

Note In the FileMaker Pro Runtime application, when you or end-users select About FileMaker Pro Runtime from the Apple menu on the Macintosh or the Help menu on Windows, you see the standard FileMaker Pro Runtime “About” dialog box. You can’t change or remove the text displayed in the “About” dialog box, including the Claris copyright and trademark notices.

Creating customized Help

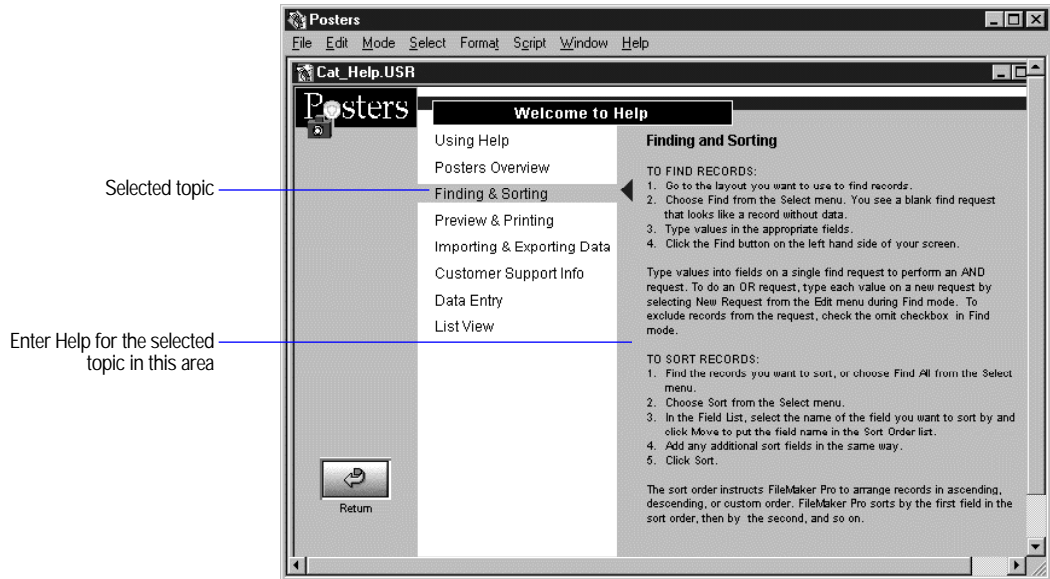
The FileMaker Pro Help system is not available in the FileMaker Pro Runtime application. Many of the features of FileMaker Pro are not available in FileMaker Pro Runtime and the standard Help would cause confusion to your end-users. You need to create a Help layout customized to your solution files.

Claris recommends Use the help layout in the Sample Solution file as a guide for developing a Help system.

To create a Help layout:

1. Using FileMaker Pro 3.0, open the Cat_Help file in the Sample SDK Solution folder (SAMPLE on Windows) in the Tools folder for the sample Help layout.

The Sample SDK Solution demonstrates a button driven help system that is seamlessly integrated into the solution. Using FileMaker buttons and commands, the user is directed to a separate file where they select help topics from a menu. A return button is available to return the user to the main solution file. This is just one way of integrating a help system in your solution.



2. Edit the layout so that your logo and solution name appear.
3. Select a Help topic on the left and then enter the Help information on that topic on the right, in the corresponding layout.
Make a new layout for each Help topic.
4. Modify the script for the Return button so that it returns your end-user to your solution.

Other documentation

Although much of your documentation might be in the Help file, you should create and distribute printed documentation for your solution to cover items not appropriate or useful in Help. Here are some suggestions for items to include in the printed documentation:

- how to install your bundled solution
- how to update to new solution files
- how to use your onscreen Help
- how to start the solution (see “Running your solution” on page 5-8)
- how to run the solution on a network
- how to choose a network protocol

- what to do in case of a damaged file (see “Recovering damaged files” on page 5-11)
- how to reach you for technical support

You might also want to include the following recommendations:

- Tell your end-users not to rename any files in your solution folder, or they may be unable to run your solution.
- Recommend that your end-users back up their data regularly. You might want to automate some of the process by including scripts that save copies of the solution files.

Opening and closing files

The Open and Close menu commands are removed from FileMaker Pro Runtime. If you want the end-user to open and close auxiliary files, create scripts to do so. The TOOLSMN.FP3 file in the FM Tools folder on the CD-ROM disc contains sample buttons you can use to make opening and closing files easier for your end-users.

Planning for networks

If your end-users plan to share your solution files across a network, use FileMaker Pro 3.0 to set the Multi-User option in the solution files before binding. If you aren't sure if your solution will be networked, use the Set Multi-User script step to switch between Single-User and Multi-User. The new Open Preferences script step allows end-users to choose their network protocol.

Keep the following items in mind if you plan to run a solution from a network:

- Make sure the FileMaker Pro Runtime network support files are installed in the proper folders on the end-user's computer and your end-users set the proper network protocol in Preferences. For file requirements and locations, see “Choosing your solution files” on page 5-1.
- To allow cross-platform network access to your solution files, bind the same primary file to both FileMaker Pro Runtime for the Macintosh and for Windows. Be sure to use the same binding key on both platforms.

- The number of guests using the FileMaker Pro Runtime application as a host is limited to 25. With FileMaker Pro Server, a computer can host a solution that can be accessed by up to 100 guests using FileMaker Pro Runtime or the FileMaker Pro application. FileMaker Pro Runtime is optimized so, when used with FileMaker Pro Server, background tasks associated with managing a database file are handled by FileMaker Pro Server.
- You need to distribute the runtime application to all the guests. You might also need to distribute the primary file to all guests when the primary file can't be easily found on the local network. A hosted primary file will not be found by the runtime application if it is located in a different AppleTalk zone or if the host and guest machine are on a TCP/IP network and not considered to be on the same local network.
- If the primary file resides on each end-user's machine, data in the primary file won't be shared. The primary function of the primary file should be locating the auxiliary files on the network. The first time the solution is opened, the end-user will be asked to locate the hosted auxiliary files. If the end-user has master access to the primary file, the location of the auxiliary files will be updated and found automatically.
- You should only launch or host one FileMaker Pro Runtime application at a time.

Important To network a file in kiosk mode, end-users must be able to run the Open Preferences script and choose a network in Preferences. After changing the network, the end-user might need to restart the machine and the runtime application.

You may want to document the following for your end-users:

- The first end-user to open the solution on the network becomes the designated host. It is best to host the solution files on a machine that is dedicated to hosting your solution.

Tip Network performance is optimized by hosting the solution files on the fastest machine and dedicating that machine as the host.

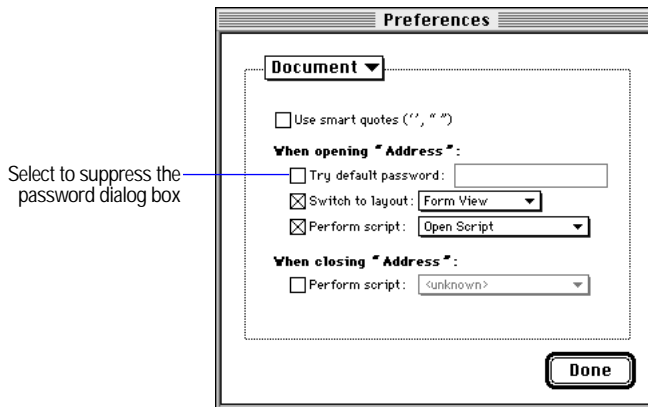
- After a solution is opened by a guest, the host and the guest share the same information.
- Only one end-user can edit a record at any given time. Others can read that record, but no one can modify it until the current end-user finishes working and moves to another record.
- All changes made to the solution will be saved on the host machine.

Using passwords

You should define a password to protect your solution files. If the solution files are unprotected, an end-user can open your bundled solution with the FileMaker Pro 3.0 application. Once your solution is open in the FileMaker Pro application, the end-user has access to your scripts, field definitions, access privileges, and layout mode. If you want to prevent this, you need to set passwords.

At a minimum, you should set a master password that gives you access to the entire file and another password that gives end-users limited access.

Tip In Document Preferences in FileMaker Pro 3.0, you can set the Try default password option to suppress the password dialog box. Your end-users won't need to enter a password every time they open your solution.



You or your end-users might want to enter a password other than the default when the option Try default password is set. The end-user can force the display of the password dialog box by pressing Option on the Macintosh or Shift on Windows immediately after double-clicking the primary file. Hold the key down until you see the password dialog box.

Using KioskMaker

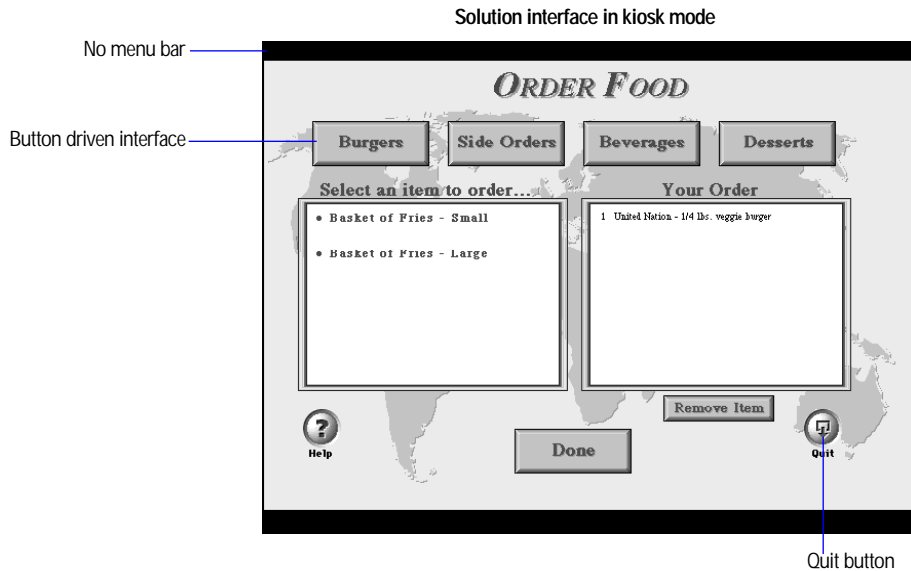
In the Binding Options dialog box, select Run solution in kiosk mode when you want to design a special interface for your solution files. In kiosk mode, your solution files lose the appearance of the operating system and the monitor area around your solution file is black. The following table describes how to emulate interface elements that are not shown when you run your solution files in kiosk mode.

To use these interface elements	Do this
Menu commands	Use buttons for all menu commands (for example, Sort, New Record, and Quit)
Zoom controls	Use the Toggle Window or Set Zoom Level script steps
Status area control	Use the Toggle Status Area button
Mode pop-up menu	Use the Enter Browse Mode, Enter Preview Mode, or Enter Find Mode buttons
Vertical scroll bar	Available if layout is longer than one screen or if browsing a View as list layout
Horizontal scroll bar	Available if layout objects are wider than one screen
Window size and position	Set before binding or use a startup script to toggle the window size

Important If your solution needs to be closed from kiosk mode, you must script the ability to quit the file. The only way to close a solution in kiosk mode is by a script attached to a Quit button. If there is no Quit button available, you can force the runtime application to quit, but this is not recommended because it might damage any open files. Force the runtime solution to quit on the Macintosh by pressing Command-Option-Esc. On Windows, press Ctrl-Alt-Del to force the runtime application to quit.

When a solution is running in kiosk mode, access to the operating system is restricted. To switch to another application or the operating system, the solution file must be closed.

Below is the sample solution file bound with KioskMaker enabled. To interact with the file, open the Kiosk solution in the Kiosk folder in the Tools folder on the CD-ROM.



Design considerations

- Start by planning your database design on paper. Decide what will happen when each button is selected, and give users a way to get back to the beginning.
- If your solution will be run with a touch screen, use large buttons and allow space between buttons.
- Try to limit the number of options available on one screen.
- Preview mode disables buttons; make sure you create a script to return you to Browse mode by choosing Continue or pressing the Enter key.

Important Menu commands and key equivalents are not available in kiosk mode. All activities normally performed with menu commands, such as closing solution files, switching layouts, creating or deleting records, or executing scripts, must be performed from a button or a script attached to a button.

Testing your solution

You should verify the functionality of your solution by testing it thoroughly before and after binding it to FileMaker Pro Runtime.

Here are some suggestions for ensuring the quality of your solution:

- Verify every function and option in your solution.
- Verify that the scripts and buttons work as expected. This is especially important if you are running your solution in kiosk mode.
- Verify your installation procedures and test your documentation.
- If you're developing a cross-platform solution, test it on both the Macintosh and Windows machines to eliminate any platform-specific problems.
- Verify that your solution layouts display well on monitors with different color capabilities and resolutions.
- Verify that your solution layouts display well on the smallest size monitor your end-users may be using.
- Test your solution with actual data.
- Make sure all the auxiliary files are present.
- Show your solution to intended end-users to uncover any usability problems.
- Install your bundled solution to a completely different computer to verify that all the files associated with the primary file can be found.
- Test a networked solution over a variety of networks.

Cross-platform considerations

If you're developing a solution to be used on both Windows and Macintosh platforms, consider the features and limitations of both (for example, font technology, colors, and naming conventions). A file discussing cross-platform topics and issues is on the CD-ROM disc in the Support folder.

Important If you are changing the three-character extension, you should first bind solution files on the Windows platform, and then the Macintosh.

Converting and upgrading solution files

This section assumes you have developed a solution in the FileMaker Pro 2.1 SDK and want to upgrade your current end-users to FileMaker Pro 3.0 SDK. This lets you take advantage of the many new features in FileMaker Pro 3.0, such as relational capabilities and more robust scripting.

To upgrade your solution files:

1. Convert the 2.x solution files to FileMaker Pro 3.0.
2. Add new features to the solution files, such as relational capabilities.
3. Create scripts to import data from your end-user's 2.x solution files to the new solution files.

Converting solution files

Start by opening the FileMaker Pro 2.x solution files in FileMaker Pro 3.0. The 2.x files will be renamed (“Filename old”) and the converted files will keep the same name. If the solution files use lookups or external scripts, the converted files will continue to work together. If your end-users need to import their data into the new solution files, save a copy of the converted files. Later, you will create scripts to import data from the 2.x solution files.

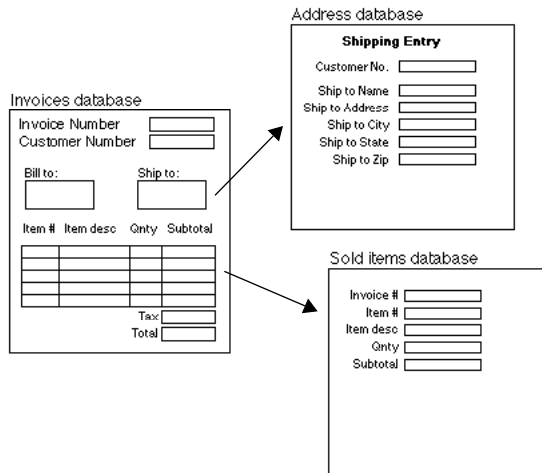
Adding new features

Carefully plan how you will change your solution files. For example, you might eliminate lookup or repeating fields to take advantage of the new relational capabilities in FileMaker Pro 3.0. If you're changing the database structure significantly, it might be easier to start a new solution file rather than to upgrade the existing database structure.

Some tips to keep in mind:

- You need a key field to establish relational links. If you are upgrading a solution that does not have a key field, you might need to create a temporary solution file, import the end-user's data, assign a unique key, and then import that data into another file that has relationships based on the key field.

- To upgrade repeating field data to a relational table, you will need to separate repeating fields by importing the data into another database file. For example, to break out the repeating fields from the Invoices database below, create a Sold Items database, and then import the repeating fields into it, choosing to split repeating field values during import. When you establish a relationship from the new Invoices database to the Sold Items database, Invoice Number will become the key field.



Importing to the new solution file

This section assumes your end-users need to import data from their 2.x solution files into the enhanced 3.0 solution files. If your solution files already contain the necessary content (for example, a database of real estate listings), you're ready to distribute your new solution files after you've converted the 2.x solution files.

Here are sample steps to convert the Address database above, and to create scripts to import data from the end-user's 2.x Address file:

- Convert copies of the 2.x solution files, making sure to keep the filenames the same as the end-user's.
- You'll need to make sure that this solution uses new filenames, for example, Address2. Because the filenames have changed, be sure to update all of the relationships, scripts, and value lists during the conversion process.

3. Create scripts that import data from the old filename (Address) to the new filename (Address2). Although you're working in FileMaker Pro 3.0, the scripts you are creating will work with your end-user's 2.x solution files.

If your end-users only want to import a subset of the records in the 2.x file format, you should create a script that opens the database, goes to Find Mode and pauses. They then search on the criteria they choose. The script should then continue by importing the found set.

Important Make sure that the path to the old file (Address) is similar on your machine and your end-user's machines. For example, if your solution files are in the same folder, your new solution file, Address2, will need to be in the same folder as your end-user's solution files.

4. Test your scripts carefully. It is a good idea to use sample data to make sure the imports are working properly and data is going to the correct fields.
5. Distribute only the new solution files (Address2). The end-users will run the script, which finds the 2.x Address file and imports the records into the Address2 file. During the script, the runtime application temporarily converts a copy of the old file (Address) to FileMaker Pro 3.0, and deletes it when the converted file is closed.

Now your end-users should start using the new solution files (Address2). It is recommended that they delete the old solution files after making a backup copy.

Keep the following tips in mind:

- Provide instructions telling end-users how to use your scripts to convert their solution files and import data into the new solution files.
- Use file size information to calculate how much disk space is necessary for the conversion to go smoothly. Keep in mind that a 2.x file that is opened via a script with the 3.0 runtime engine is copied, and then converted. For example, if a solution file is 2 MB, you will need at least 4 MB available to convert their solution.
- Set appropriate time expectations for your end-users. If their solution files are large, the conversion process may be very lengthy.

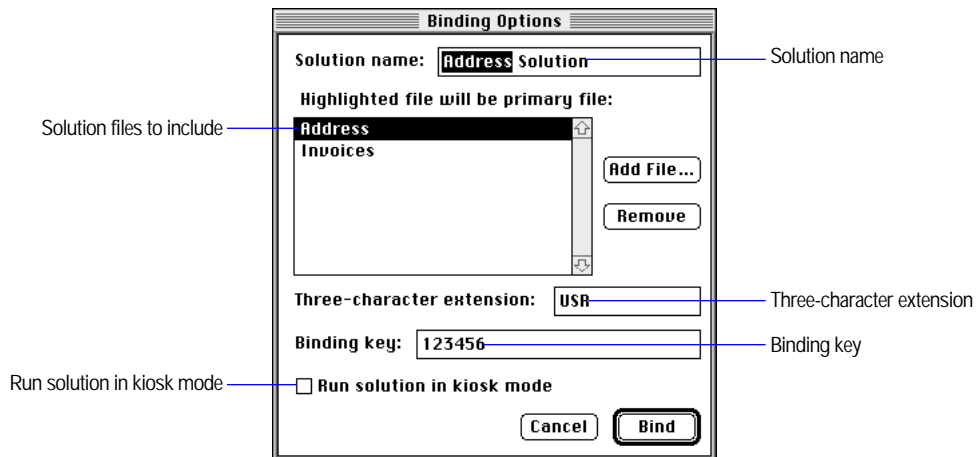
Chapter 4: Binding solution files

This chapter describes how to create the bundled solution you'll distribute to your end-users. It assumes you have developed and thoroughly tested the solution files.

The binding process—an overview

The binding process consists of:

- including primary and auxiliary solution files
- naming the solution
- assigning the three-character extension
- assigning the binding key
- selecting additional options



After you've selected the primary file and chosen binding options, click the Bind button to create your bundled solution. FileMaker Pro Binder generates the runtime application and links it to the solution files with the binding key.

What happens during binding

A solution can consist of one primary file, or a primary file and a set of auxiliary files. The primary file is the database that FileMaker Pro Runtime opens first. Auxiliary files are related or external files that the primary file interacts with.

During binding, you specify the files that make up your solution. Then you highlight the primary file, name your solution, and provide the binding key and three-character extension. The binding key links the FileMaker Pro Runtime application to your solution files. The three-character extension associates your solution files for easier grouping in the folder. It also ensures that the appropriate runtime application is opened if an auxiliary file is double-clicked. The key, the three-character extension, and the name of the primary file are embedded in the FileMaker Pro Runtime application.

The end result of the binding process is a bundled solution—the FileMaker Pro Runtime application, the primary file, and the auxiliary files. You then distribute the bundled solution.

Before binding

Claris recommends Before you bind, keep the following suggestions in mind:

- Create a folder for your bundled solution.
- If you intend the solution to run on both Windows and the Macintosh, follow DOS naming conventions (for example, CONTACTS.USR).
- Use a key you will remember. If you should later need to add auxiliary files, you'll need to rebind using the same key. If you're developing a cross-platform solution, use the same key when you bind the solution on the Macintosh and when you bind it on Windows.

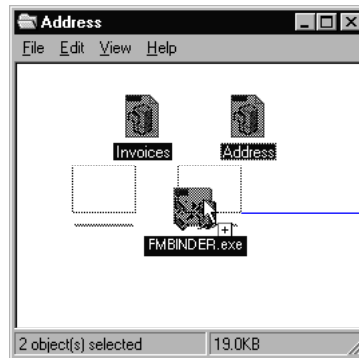
Including solution files

Before binding your primary file, you first specify all the files that you will include with your solution.

The solution files must be closed before you can bind. To bind a file that is already being hosted on a network, close the file from the host computer before binding.

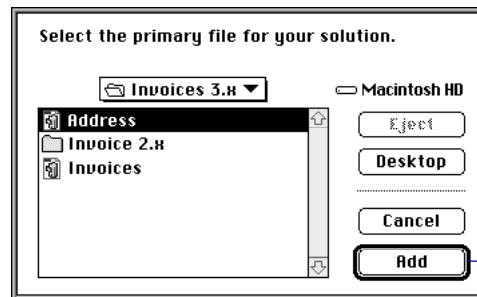
There are three ways to include solution files:

- The easiest way to include solution files is to drag and drop your solution files on top of FileMaker Pro Binder.



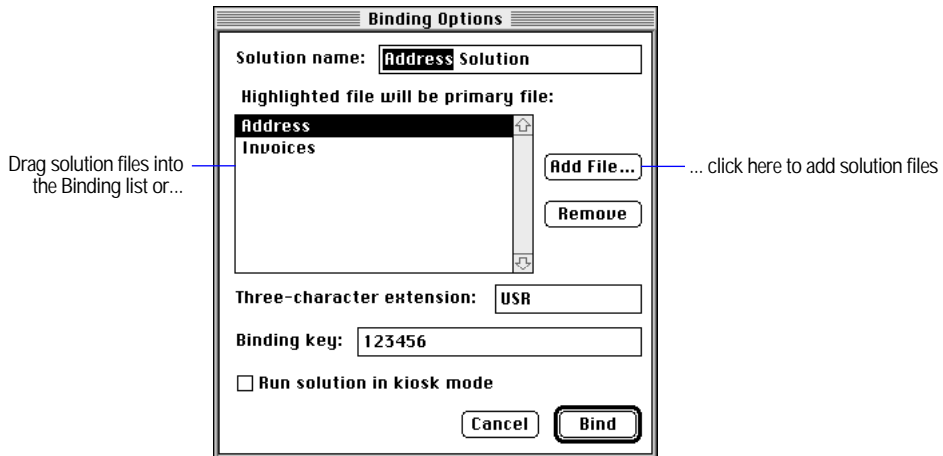
Drag solution files onto
FileMaker Pro Binder

- Another way to include solution files is to launch FileMaker Pro Binder, select the primary solution file, and click the Add button. Then, in the Binding Options dialog box, click the Add File button to add other files.



Select the primary
file, then click Add

- You can also include solution files by dragging them into the list in the Binding Options dialog box.



Cross-platform users If you're creating a solution to run on both Macintosh and Windows, you should bind the file twice: first using FileMaker Pro Binder for Windows, and then using FileMaker Pro Binder for the Macintosh. Use the same binding key on both platforms.

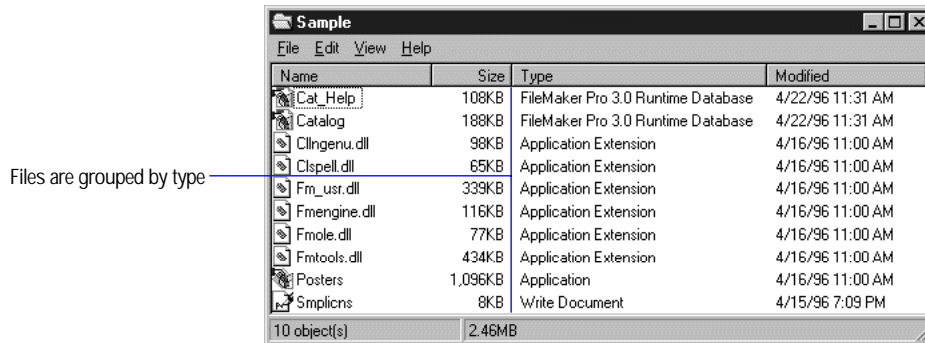
Naming the solution file

Type a name for your FileMaker Pro Runtime application in the Solution Name text box. You can also double-click the primary file and the solution name will be <Primary filename> Solution. This becomes the name of the FileMaker Pro Runtime application, which is created during the binding process.

Assigning the three-character extension

The three-character extension associates the solution files with the FileMaker Pro Runtime application. This will help your customers identify your solution files and, together with the binding key, ensure that the correct runtime application opens when a solution file is double-clicked.

Important Even with a different extension, solution files can still be opened by FileMaker Pro 3.0.



Windows solution

Assigning the three-character extension on the Macintosh

On the Macintosh, these characters become the creator type for the FileMaker Pro Runtime application. The creator type is stored in both the solution files and runtime application, and makes identifying solution files easier by associating files with the appropriate application.

Because creator types are four characters, FileMaker Pro Binder inserts an upper case F after the first character. For example, the default three-character extension “USR” becomes the “UFSR” creator type. Creator types are case-sensitive.

Important Creator types should be registered with Apple Computer to verify that the creator type you choose is unique. If the creator type is not unique, solution files may not open with the appropriate FileMaker Pro Runtime application. Claris has registered the “UFSR” creator type with Apple. Contact the Apple Developer Services or visit their site on the World Wide Web to register any other creator types.

Assigning the three-character extension on Windows

The three-character extension registers your runtime application with the operating system. The extension is used by Windows to define the icons used for the documents, and to determine which application starts when you open the primary file. The extension is generated by inserting a period at the start of the string. For example, the three-character extension “USR” becomes the “.USR” extension. The runtime application adds the extension to the filenames during the binding process. You must choose an extension that is unique to your end-user’s system.

Assigning the binding key

The binding key internally links the primary file to the FileMaker Pro Runtime application. It is stored in both the runtime application and the solution files to ensure that the bound runtime application will only be able to open the appropriate solution files.

The binding key is case-sensitive on the Macintosh, and must be between 6 and 31 characters. Use a key you'll remember and write it down or record it in a safe place, such as a password-protected FileMaker Pro database.

If you're creating a solution for both the Macintosh and Windows environments, use the same key when you bind on the Macintosh and when you bind on Windows.

If you don't want to select additional options, click Bind to bind your solution files. FileMaker Pro Binder creates the FileMaker Pro Runtime application and then links the key to the primary file.

Running your solution in kiosk mode

KioskMaker provides a special interface for your solution. Many of the standard system interface components are removed, such as the menu bar and menu commands. The scroll bars are only available if your layout is larger than one screen. Because much of the FileMaker Pro Runtime interface is unavailable in kiosk mode, you must create buttons and scripts for the end-users. See "Using KioskMaker" on page 3-10 for design tips.

Important If you need to close the files, switch to other applications, or use a FileMaker Pro Runtime feature available only from a menu command, you must create a script and provide access to the script from a button on the layout.

Sharing solution files across platforms

To share a bundled solution over a network of both Windows and Macintosh computers, follow these steps:

1. Bind the solution files on one platform.
2. Copy the solution files to a computer on the other platform.

3. Bind the solution files on that platform using the same key you used to bind your primary file.
4. Distribute your bundled solution.

See “Cross-platform considerations” on page 3-12 and “Running solution files on a network” on page 5-9 for tips.

Changing or creating solutions

FileMaker Pro SDK entitles you to create or change your solutions. To add solution files or change binding options, rebind the files in FileMaker Pro Binder using the same binding key as the distributed solution.

You might also need to rebind your solution if you change the name of the primary file or if you forget your key. In these cases, you need to rebind your primary file with the Binder application and distribute the new solution files and runtime application. See “Updating a solution” on page 5-10.

Chapter 5: *Distributing your bundled solution*

The final step in preparing your bundled solution is creating an installation procedure for your solution. To distribute your bundled solution, you need to:

- choose and organize the files that your end-users need to use your solution
- choose how you will distribute your solution, for example on a CD-ROM or on several floppy disks
- provide your end-users with documentation for installing your solution

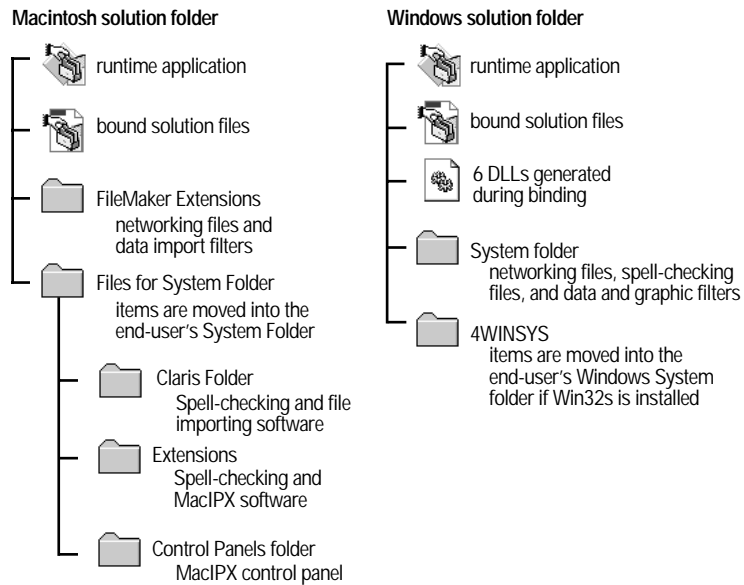
Choosing your solution files

Start by gathering all the files that are included in your bundled solution. These include the bound primary and auxiliary files, the runtime application, and optional files that enable networking, data and graphic importing, and spell-checking software. On Windows, include the DLLs that are created during the binding process. If your end-users have Windows 3.1 or Windows for Workgroups 3.11, they'll need to have Win32s 1.30c or newer installed before using your solution files. You can copy Win32s 1.30c disks from the CD-ROM or get the latest version from Microsoft.

Collect all your files in one folder, which will mimic the configuration that you will send to your end-users.

Include the optional files that your end-users might need in the appropriate folder inside the solution folder. These optional files are in the Runtime Files folder for the Macintosh and the RUNTIME folder for Windows. Refer to appendix B for the exact location of FileMaker Pro files on the CD-ROM.

Important The optional files and folders inside the solution folder cannot be moved or renamed.



Sample Macintosh and Windows solution folders

Minimum requirements for Windows solution

These files must be copied to the solution folder on the end-user's hard disk. The minimum files required to run FileMaker Pro runtime solution files on Windows are:

- Clspell.dll
- ClIngen.dll
- Fmengine.dll
- Fmole.dll
- FM_<Extension>.dll
- Fmtools.dll
- runtime application
- your bound solution files

If Win32s is installed, you need to distribute the 4WINSYS folder from the CD-ROM.

Minimum requirements for Macintosh solution

On the Macintosh, all you need to distribute is the runtime application and your bound solution files.

Runtime Files folder

Items in the Runtime Files folder should be distributed along with your bound solution files and the runtime application to enable additional features, such as spell-checking, data and graphic importing, and networking. Drag the contents of this folder into the same folder as the runtime application. When the Macintosh runtime application is opened, the items from the Files for System Folder will be moved into the System Folder. On Windows 3.1 and Windows for Workgroups, items from the 4WINSYS folder will be moved to the Windows System folder. If the folder contents are successfully moved, the empty folder will be deleted. On Windows 95 and Windows NT, the folder is not necessary and is automatically deleted.

Tip On the Macintosh, you can drop additional items that you would like installed in your end-user's System Folder in the Files for System Folder folder. For example, if you place an AppleScript® OSAX document in a Scripting Additions folder inside the Extensions folder (in the Files for the System Folder folder), the runtime application will move the script over and it will be available when the runtime application is opened.

Additional files required by Windows 3.1 and Windows for Workgroups 3.11

If your solution will run on Windows 3.1 or Windows for Workgroups 3.11, you need to distribute additional files with your bundled solution. You need to distribute the files from the WIN32S1.30C folder on the CD-ROM (or get the latest version from Microsoft) and install them on the end-user's machine before opening the runtime application. Also, include the 4WINSYS folder from the CD-ROM in your solution folder. When the solution is opened for the first time, the runtime application will move the items in the 4WINSYS folder into the System folder in the Windows folder.

Creating Win32s diskettes

If you are distributing solution files for Windows 3.1 or Windows for Workgroups 3.11, your end-users will need to install Win32s before opening your solution files. You can copy the Win32s 1.30c disk images from the CD-ROM, or get the newest version from Microsoft.

To create Win32s diskettes:

1. Format three 1.4 MB diskettes and name them `Disk1`, `Disk2`, and `Disk3`.
2. Drag the contents of the corresponding folders from the CD-ROM onto the floppy disks.

Important Disk names, filenames and paths cannot be modified or the Win32s installation will fail.

Additional files required for networked solutions

If your end-users will be using your bundled solution over a network, you'll need to distribute additional files from the CD-ROM. If you're not sure which network your end-users are using, distribute the entire contents of the Runtime Files folder on the Macintosh and/or the RUNTIME folder on Windows. Place the two folders in the solution file folder. See "Sample Macintosh and Windows solution folders" on page 5-2. When the solution is opened, the end-user will need to choose the appropriate network in Preferences.

If your end-users are sharing files on an AppleTalk network on the Macintosh:

The networking software comes with the operating system. You need to distribute the AppleTalk Network file inside the FileMaker Extensions folder.

If your end-users are sharing files using MacIPX on the Macintosh:

You'll need to distribute the MacIPX control panel and extensions. Be sure to distribute the Control Panels folder and the Extensions folder inside Files for System Folder. When the runtime application is first opened, these files will be moved into the end-user's System Folder. You also need to distribute the MacIPX Network file inside the FileMaker Extensions folder.

If your end-users are sharing files using MacTCP/IP with the Mac OS:

They'll need to have MacTCP 2.0.6 installed, which is included in version 7.5 of the operating system. If they don't have MacTCP 2.0.6, they can use Open Transport 1.0.8 or later, which is available with the newest version of the operating system. You also need to distribute the TCP/IP Network file inside the FileMaker Extensions folder.

If your end-users are using the MS IPX/SPX network with Windows 95 and Windows NT

They should use the IPX/SPX-compatible Protocol to share FileMaker Pro files. On Windows NT, they should use the NWLink IPX/SPX Compatible Transport. You also need to distribute the FMIPX32.NET file inside the FileMaker System folder.

If the host machine will be hosting files to more than twelve guests, change the Maximum Connections in the Advanced panel of the Network control panel to at least 40. Consider increasing the SPX connections if you cannot connect the desired number of guests.

If your end-users are using the IPX/SPX network with Windows 3.1 and Windows for Workgroups 3.11:

They should use the Novell NetWare Client Shell version 3.26 or later to share FileMaker Pro files. You also need to distribute the FMIPX32.NET and FMIPX16.DLL files inside the FileMaker System folder and the 4WINSYS folder with your solution.

Important FileMaker networking will not work if the Microsoft IPX/SPX compatible driver is installed. The driver must be removed.

Novell NetWare settings

If your end-users are using a Novell NetWare network on Windows 3.1 or Windows for Workgroups 3.11, they'll need to change a few settings to network your bundled solution. To share FileMaker Pro runtime files over the network, the end-user's machine must be a fully configured NetWare client.

To share FileMaker Pro Runtime solution files:

- Use the Windows Setup program to set the network to the appropriate NetWare option (usually NetWare 3.26 and above).
- Add the following entries to your NET.CFG (or SHELL.CFG) file:

```
GET LOCAL TARGET STACKS=10
SPX CONNECTIONS=40
```

Get local target stacks needs to be set on all guest machines. SPX connections should be set on the host machine if it will host more than twelve guests or on guest machines using additional SPX applications. Consider increasing the SPX connections if you cannot connect the desired number of guests.

If your end-users are using MS TCP/IP network with Windows for

Workgroups 3.11:

They'll need to install the TCP/IP-32 (version 3.11b) software, available from Microsoft. You also need to distribute the FMTCP32.NET file inside the FileMaker System folder.

Choosing the distribution method

After you have chosen the files that comprise your solution and determined where the files will go, you need to decide how your end-users will install them. If you plan to distribute your bundled solution on floppy disks, you will need to either use a compression utility or a custom installation application to compress and store the runtime application, your bound solution files and additional files on several disks. You can also distribute your bundled solution on a CD-ROM or other medium, such as optical discs or cartridge drives.

Compressing your solution

Because the runtime application does not fit on one floppy disk, you'll use a compression utility to store the runtime application over several disks. To compress files, use a utility such as:

- StuffIt Deluxe by Aladdin Systems (for the Macintosh)
- DiskDoubler by Symantec Corporation (for the Macintosh)
- PKZip by PKWARE (for Windows)

Creating a custom installation

To both compress the bundled solution files and determine where they are installed on your end-user's hard disk, use a custom installer program such as:

- Apple Installer (for the Macintosh)
- StuffIt InstallerMaker by Aladdin Systems (for the Macintosh)
- Developer VISE by MindVision (for the Macintosh)
- Wise Installation System by Great Lakes Business Solutions (for Windows)
- WINstall by Dovcom (for Windows)
- Doughboy Professional Install by NeoPoint Technologies (for Windows)

Installing your solution

You'll need to provide installation instructions to your end-users. Keep the following in mind:

- Provide written instructions for copying or installing your solution to your end-user's hard disk.
- Include software and instructions specifying how your end-users will decompress your solution files.
- If your end-users are installing your solution on Windows 3.1 or Windows for Workgroups 3.11, provide instructions for optimizing their hard disk for Win32s and installing Win32s.
- If your solution might be run on a variety of operating systems, it is safest to include all optional SDK files.

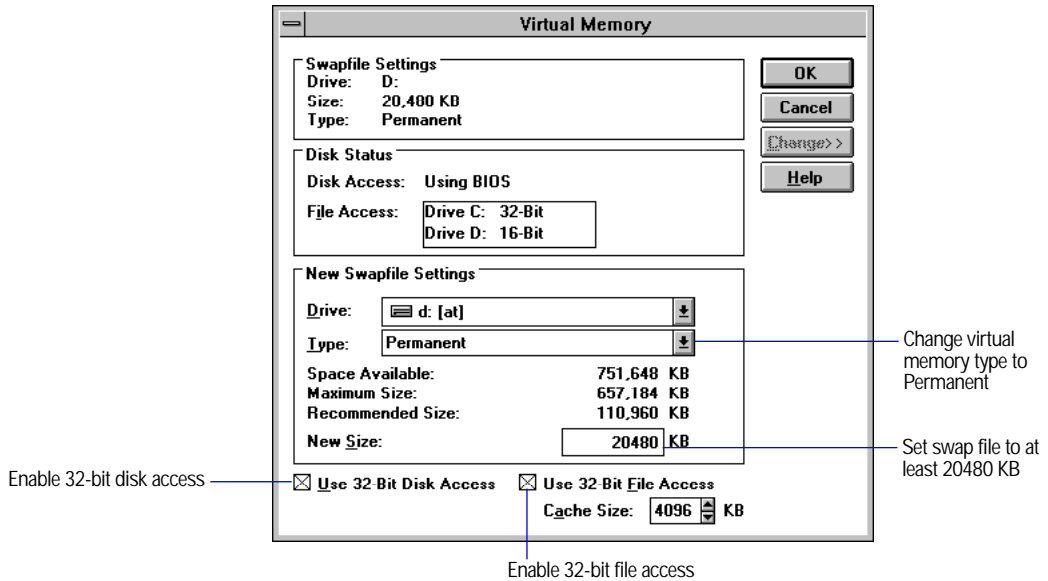
Installing Win32s

To run solution files on Windows 3.1 and Windows for Workgroups 3.11, your end-users will need to have Win32s 1.30c or later. You can make disk copies of Win32s 1.30c from the CD-ROM or get the newest version from Microsoft. See "Creating Win32s diskettes" on page 5-3.

To install Win32s:

1. Open the 386 Enhanced control panel and change the virtual memory type to Permanent.
2. Make sure the swap file size is at least 20480 KB.
3. Select Use 32-Bit Disk Access and Use 32-Bit File Access, if available.

If any changes were made, they'll need to restart Windows before installing Win32s.



4. Install Win32s.

Instruct your end-users to insert the Win32s Disk1. In the Program Manager, choose Run from the File menu and type `a:\SETUP.EXE` from the Program Manager. Follow the Win32s setup instructions.

5. When the Win32s installation is complete, the Freecell Setup dialog box appears.

Claris recommends that your end-users install the game Freecell, provided by Microsoft, because it helps verify that the Win32s software has been installed correctly.

6. Restart the machine before installing the bundled solution.

7. Make sure the 4WINSYS folder is in the solution folder on the end-user's hard disk after the solution has been installed.

Installing your solution files for a network

If you're creating a multiuser solution, the runtime application should be installed for each guest on the network, and solution files should be hosted by a dedicated machine. You should distribute the primary file to guests when the primary file can't be easily found on the local network. The primary file will not be found by the runtime application if it is located in a different AppleTalk zone or if the host and guest machine are on a TCP/IP network and not considered to be on the same local network. You'll want your shared data to reside on the host machine, so the primary file should be a simple database with a startup script that looks for the networked files. The first time the solution is opened, the end-user is asked to locate the files on the network. If the end-user has master access to the solution files, the primary file will store the locations of the networked files, and find them automatically after that.

Running your solution

The first time your end-users double-click the runtime application icon, FileMaker Pro Runtime will move items from Files for System Folder into the System Folder on the Macintosh. On Windows 3.1 or Windows for Workgroups 3.11, the contents of the 4WINSYS folder will be moved into the System folder in the Windows folder. On Windows 95 or Windows NT, the 4WINSYS folder is not necessary and is automatically deleted.

On the Windows platform, the extension associated with the solution will not be registered until the runtime application has been opened. If a solution file is opened before the runtime application has registered the extension, the runtime application won't be found.

Your end-users should start your solution by double-clicking the FileMaker Pro Runtime application, not the primary file. They can rename the FileMaker Pro Runtime application to a unique name for your solution after it has been installed.



Address Solution

Runtime application icon



Address

Primary file icon

Double-clicking the icons for the primary or auxiliary files might result in errors, depending on whether there are other copies of the runtime application on the hard disk. If your end-users have more than one solution on their computers with the same three-character extension and they double-click the icon for the primary file, the most recently installed FileMaker Pro Runtime application is opened, which may not be the correct application for your solution's primary file.

Whenever an end-user starts FileMaker Pro Runtime, the application looks for the primary file that has been bound to it. It looks first in the runtime application folder, and then on the local network. If the primary file can't be found, the end-user sees a dialog box asking to locate the primary file.

Claris recommends Caution your end-users that they should not rename any solution files. If they do, relationships and external scripts won't work properly.

Running solution files on a network

Solution files can be hosted with FileMaker Pro, FileMaker Pro Runtime, or FileMaker Pro Server. Distribute the runtime application to all the guests. The solution files should be hosted from one computer, and your end-users access them as guests over a network. You might also need to distribute the primary file to all guests when the primary file can't be easily found on the local network. A hosted primary file will not be found by the runtime application if it is located in a different AppleTalk zone or if the host and guest machine are on a TCP/IP network and not considered to be on the same local physical network.

To make locating the auxiliary files seamless, create a startup script in the primary file that opens the auxiliary file on the network. When an end-user first starts FileMaker Pro Runtime, the application asks for the location of the auxiliary file. After locating the file the first time, the runtime application will automatically find the host on the network if the end-user has master access to the primary file.

To share a bundled solution over a network of both Windows and Macintosh computers:

Host the files from one computer and distribute the Macintosh runtime application to Macintosh guests and the Windows runtime application to Windows guests. See "Planning for networks" on page 3-7 for more information.

Updating a solution

You will need to update your solution if you want to make feature enhancements, modifications, or if you want to add additional files.

You can update a solution by making modifications to the primary file and sending that file to your end-users. If you are adding more files, you need to bind those files with the original key used when you bound the primary file.

Note To update a primary file, the name and binding key must be the same as when you originally bound the file. If you change the name of the primary file, you need a new FileMaker Pro Runtime application. See “Changing or creating solutions” on page 4-7.

Updating the primary file

To update a primary file:

1. Open the original primary file in FileMaker Pro 3.0.
2. Make the changes to the primary file.

As long as the key and the filename have not changed, you don't need to rebind the primary file.

3. Send your end-users a copy of the new primary file.
4. Create scripts that import end-users' existing data into the new primary file.

Important When you make a change to your solution, you should make sure that your end-users can import their data into your updated solution. Include a script attached to a button to make it easy for your end-users to import their data into the new solution files.

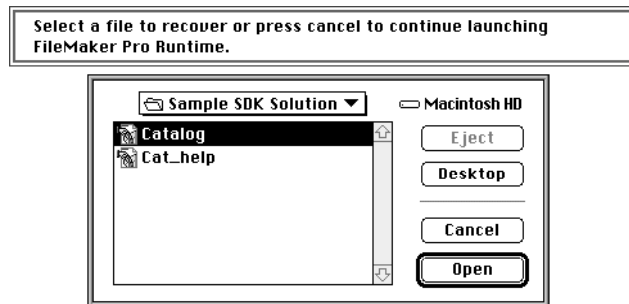
Adding new or changed auxiliary files

To add new or changed files, rebind the solution files and generate a new runtime application. Use the same binding key that you used for the primary file. Remember that the key is case-sensitive on the Macintosh.

Recovering damaged files

Power failures, hardware problems, or other factors can damage a FileMaker Pro file. If your solution becomes damaged, your end-user needs to recover the damaged file. When the FileMaker Pro Runtime application discovers a damaged file, a dialog box appears telling the end-user to contact the developer.

Once you know which file is damaged, you can recover it. To recover a damaged file on a Macintosh, double-click the FileMaker Pro Runtime application and then press Option-Command while the file is opening. On Windows, double-click the FileMaker Pro Runtime application and press Ctrl+Shift while the file is opening. Hold the keys down until you see the Recover File dialog box.



In the recovery process, the FileMaker Pro Runtime application does the following:

- creates a new file
- renames the damaged file. It adds old to the end of the filenames. For example, Contact Manager on the Macintosh is renamed to Contact Manager Old and CONTACTS.FP3 on Windows is renamed CONTACTS OLD.FP3.
- gives the repaired file the original name

In your printed documentation, you should tell your end-users what to do once a file has been recovered.

Tell your end-users to:

- open the recovered solution file
- save a compressed copy using the Save a Copy As command
- give the compressed file the same name as the original filename

Claris recommends In the event that your solution files become damaged, make sure your end-users have access to your technical support phone number in your printed documentation or in a text file. If the file is damaged, they won't be able to access the "About" layout in your solution to find your phone number.

Appendix A: FileMaker Pro Runtime features

FileMaker Pro Runtime is a modified version of the FileMaker Pro application. With FileMaker Pro Runtime, your end-users can't modify the design of your solution files.

In FileMaker Pro Runtime:

- end-users can use your solution files without having the FileMaker Pro application
- all the database design features have been removed or hidden
- some menu items have been removed

The following table shows which menu commands are available in FileMaker Pro Runtime.

Menu	Menu Item	FileMaker Pro	FileMaker Pro Runtime
File menu	New...	•	
	Open...	•	
	Close	•	
	Define Fields...	•	
	Define Relationships...	•	
	Access Privileges	•	
	Change Password...	•	•
	Single/Multi User	•	
	Page Setup or Print Setup...	•	•
	Print...	•	•
	Import/Export	•	•
	Save a Copy As...	•	•
	Recover...	•	Option-Command on Macintosh; Ctrl+Shift on Windows
	Quit or Exit	•	•

Menu	Menu Item	FileMaker Pro	FileMaker Pro Runtime
Edit menu	Undo	•	•
	Cut	•	•
	Copy	•	•
	Paste	•	•
	Paste As... (on Windows only)	•	•
	Clear	•	•
	Duplicate	•	
	Paste As... (on Windows only)	•	
	Select All	•	•
	Paste Special	•	•
	Object (on Windows only)	•	•
	Spelling	•	•
	Preferences...	•	Modified (some of the preferences are not available)
	Mode menu	Browse	•
Find		•	•
Layout		•	
Preview		•	•
New Record		•	•
Duplicate Record		•	•
Delete Record		•	•
Delete All		•	•
Sort...		•	•
Replace...		•	•
Relookup		•	•
Revert Record		•	•
Select menu		Find All	•
	Find Omitted	•	•
	Modify Last Find	•	•
	Perform Find	•	•
	Omit	•	•
	Omit Multiple...	•	•
	View as Form	•	•
	View as List	•	•

Menu	Menu Item	FileMaker Pro	FileMaker Pro Runtime
Arrange menu	All menu items	•	
Format menu	Font	•	•
	Size	•	•
	Style	•	•
	Align Text	•	•
	Line Spacing	•	•
	Text Color	•	•
	Text...	•	•
	Text Ruler	•	•
Script menu	ScriptMaker...	•	
	<Script names>	•	•
Window menu	Hide Window (Macintosh)	•	•
	Tile (Windows)	•	•
	Cascade (Windows)	•	•
	Arrange Icons (Windows)	•	•
	<Names of open files>	•	•
Apple menu	About FileMaker Pro/ FileMaker Pro Runtime	•	•
	Help	•	
Help menu (Windows)	Contents	•	
	Keys	•	
	Quick Info	•	
	How to Use Help	•	
	About FileMaker Pro/ FileMaker Pro Runtime	•	•

Additional differences

Other features have been removed from the FileMaker Pro Runtime application. If your scripts contain any of the following items, FileMaker Pro Runtime skips over them, and may not alert the end-user. These items can be in scripts, but they won't be executed.

- print script definitions (found set is printed)
- print field definitions (found set is printed)
- open Define Fields
- open Define Relationships
- open ScriptMaker
- open Help
- New (create new file)
- perform external script (if the specified file has not been bound)
- script errors return different values with the runtime application

Appendix B: SDK file locations

The following sections show the locations for the SDK files and folders. Solution files should be copied to the same folder as the runtime application. The FileMaker Pro Runtime application moves the contents of the Files for System Folder (on the Macintosh) or the 4WINSYS folder (on Windows) to the System folder when it is first opened.

Contents of the Runtime folder

The following tables show the files and folders inside the Runtime Files folder (RUNTIME on Windows). Items in this folder should be distributed along with your bound solution files and the runtime application. Drag the contents of the Runtime folder into the same folder as the runtime application.

Distribute the following files or folders with solution files for the Macintosh.

File or folder	Description	Location on CD-ROM	Preferred location on end-user's hard disk
FileMaker Extensions folder	Place in same folder as runtime application to enable data importing and FileMaker networking	FileMaker Pro 3.0 SDK: Runtime Files	Solution folder
MacIPX network	Distribute to support MacIPX networking	FileMaker Pro 3.0 SDK: Runtime Files: FileMaker Extensions folder	Solution folder: FileMaker Extensions
AppleTalk network	Distribute to support AppleTalk networking	FileMaker Pro 3.0 SDK: Runtime Files: FileMaker Extensions folder	Solution folder: FileMaker Extensions
MacTCP network	Distribute to support MacTCP networking	FileMaker Pro 3.0 SDK: Runtime Files: FileMaker Extensions folder	Solution folder: FileMaker Extensions
DBF	Distribute to import .DBF files	FileMaker Pro 3.0 SDK: Runtime Files: FileMaker Extensions folder	Solution folder: FileMaker Extensions
ClarisWorks®	Distribute to import ClarisWorks files	FileMaker Pro 3.0 SDK: Runtime Files: FileMaker Extensions folder	Solution folder: FileMaker Extensions
Files for System Folder	Distribute contents to enable spell-checking, MacIPX networking, and to import graphics	FileMaker Pro 3.0 SDK: Runtime File	Solution folder
Claris Folder	Copy to end-user's hard disk to enable spell-checking and to import graphics	FileMaker Pro 3.0 SDK: Runtime Files: Files for System Folder	Solution folder: Files for System Folder
Claris XTND System	Enables graphics importing	FileMaker Pro 3.0 SDK: Runtime Files: Files for System Folder: Claris Folder	Solution folder: Files for System Folder: Claris Folder

File or folder	Description	Location on CD-ROM	Preferred location on end-user's hard disk
US English - Spelling	Spell-checking dictionary	FileMaker Pro 3.0 SDK: Runtime Files: Files for System Folder: Claris Folder	Solution folder: Files for System Folder: Claris Folder
User Dictionary	Stores words added to the user dictionary	FileMaker Pro 3.0 SDK: Runtime Files: Files for System Folder: Claris Folder	Solution folder: Files for System Folder: Claris Folder
Claris Translators folder	Contains graphic import filters	FileMaker Pro 3.0 SDK: Runtime Files: Files for System Folder: Claris Folder	Solution Folder: Files for System Folder: Claris Folder
EPSF PFLT	Enables importing of EPSF files	FileMaker Pro 3.0 SDK: Runtime Files: Files for System Folder: Claris Folder: Claris Translators	Solution Folder: Files for System Folder: Claris Folder: Claris Translators
MacPaint® 2.0	Enables importing of MacPaint 2.0 files	FileMaker Pro 3.0 SDK: Runtime Files: Files for System Folder: Claris Folder: Claris Translators	Solution Folder: Files for System Folder: Claris Folder: Claris Translators
PICT	Enables importing of PICT files	FileMaker Pro 3.0 SDK: Runtime Files: Files for System Folder: Claris Folder: Claris Translators	Solution Folder: Files for System Folder: Claris Folder: Claris Translators
TIFF	Enables importing of TIFF files	FileMaker Pro 3.0 SDK: Runtime Files: Files for System Folder: Claris Folder: Claris Translators	Solution Folder: Files for System Folder: Claris Folder: Claris Translators
Extensions folder	Copy to end-user's hard disk for MacIPX networking and Power PC support files	FileMaker Pro 3.0 SDK: Runtime Files: Files for System Folder	Solution Folder: Files for System Folder
Claris XTND Enabler	Enables graphics importing on Power Macintosh machines	FileMaker Pro 3.0 SDK: Runtime Files: Files for System Folder: Extensions	Solution Folder: Files for System Folder: Extensions
Claris Spelling Enabler	Enables spell-checking on Power Macintosh machines	FileMaker Pro 3.0 SDK: Runtime Files: Files for System Folder: Extensions	Solution Folder: Files for System Folder: Extensions
MacIPX AppleTalk	Enables MacIPX networking on the AppleTalk network protocol	FileMaker Pro 3.0 SDK: Runtime Files: Files for System Folder: Extensions	Solution Folder: Files for System Folder: Extensions
MacIPX Token Ring	Enables MacIPX networking on the Token Ring network protocol	FileMaker Pro 3.0 SDK: Runtime Files: Files for System Folder: Extensions	Solution Folder: Files for System Folder: Extensions
MacIPX Ethernet	Enables MacIPX networking on the Ethernet network protocol	FileMaker Pro 3.0 SDK: Runtime Files: Files for System Folder: Extensions	Solution Folder: Files for System Folder: Extensions
Control Panels folder	Copy to end-user's hard disk to support IPX/SPX networks	FileMaker Pro 3.0 SDK: Runtime Files: Files for System Folder	Solution folder: Files for System Folder
MacIPX	Control panel	FileMaker Pro 3.0 SDK: Runtime Files: Files for System Folder: Control Panels	Solution folder: Files for System Folder: Control Panels

Distribute the following files or folders with solution files for Windows.

File or folder	Description	Location on CD-ROM	Preferred location on end-user's hard disk
SYSTEM folder	Place in same folder as runtime application to enable data importing and FileMaker networking	FMP30SDK	Solution folder
FMBMP32.FLT	BMP graphic filter	FMP30SDK\SYSTEM	Solution folder\SYSTEM
FMCGM32.FLT	CGM graphic filter	FMP30SDK\SYSTEM	Solution folder\SYSTEM
FMDRW32.FLT	DRW graphic filter	FMP30SDK\SYSTEM	Solution folder\SYSTEM
FMGIF32.FLT	GIF graphic filter	FMP30SDK\SYSTEM	Solution folder\SYSTEM
FMHPGL32.FLT	HPGL graphic filter	FMP30SDK\SYSTEM	Solution folder\SYSTEM
FMMAC32.FLT	MacPaint graphic filter	FMP30SDK\SYSTEM	Solution folder\SYSTEM
FMPCX32.FLT	PCX graphic filter	FMP30SDK\SYSTEM	Solution folder\SYSTEM
FMPIC32.FLT	PIC graphic filter	FMP30SDK\SYSTEM	Solution folder\SYSTEM
FMSLD32.FLT	Lotus SLD graphic filter	FMP30SDK\SYSTEM	Solution folder\SYSTEM
FMTIFF32.FLT	TIFF graphic filter	FMP30SDK\SYSTEM	Solution folder\SYSTEM
FMWMF32.FLT	Metafile graphic filter	FMP30SDK\SYSTEM	Solution folder\SYSTEM
CWORKS.IMP	ClarisWorks database translation filter	FMP30SDK\SYSTEM	Solution folder\SYSTEM
DBF.IMP	DBF database translation filter	FMP30SDK\SYSTEM	Solution folder\SYSTEM
USEENGLISH.MSP	The primary dictionary of 100,000 words that FileMaker Pro uses to spell-check your files	FMP30SDK\SYSTEM	Solution folder\SYSTEM
USER.USP	The dictionary that stores your customized list of spelling exceptions and additions to the US English - Spelling dictionary	FMP30SDK\SYSTEM	Solution folder\SYSTEM
FMIPX32.NET	Distribute to support IPX/SPX networking	FMP30SDK\SYSTEM	Solution folder\SYSTEM
FMTCP32.NET	Distribute to support TCP networking	FMP30SDK\SYSTEM	Solution folder\SYSTEM
FMATM16.DLL	Support for Adobe Type Manager (Windows 95 and Windows NT only)	FMP30SDK\SYSTEM	Solution folder\SYSTEM
FMATM32.DLL	Support for Adobe Type Manager (Windows 95 and Windows NT only)	FMP30SDK\SYSTEM	Solution folder\SYSTEM
FMIPX16.DLL	Distribute to support IPX/SPX networking on Windows 3.1 and Windows for Workgroups	FMP30SDK\SYSTEM	Solution folder\SYSTEM

File or folder	Description	Location on CD-ROM	Preferred location on end-user's hard disk
4WINSYS	Distribute on Windows 3.1 or Windows for Workgroups 3.11	FMP30SDK\SYSTEM	Solution folder\SYSTEM
CTRL3D32.DLL	Provides Windows 95 dimensional interface	FMP30SDK\SYSTEM	Solution folder\SYSTEM
NWIPXSPX.DLL	Netware IPX/SPX network support file	FMP30SDK\SYSTEM	Solution folder\SYSTEM
NWNETAPI.DLL	Netware network support file	FMP30SDK\SYSTEM	Solution folder\SYSTEM
WIN32S1.30C folder	Enables FileMaker Pro Binder and runtime application to run on Windows 3.1 and Windows for Workgroups	Root level of CD-ROM	Solution folder

Reference information on CD-ROM

Below is a guide to the technical and reference information on the FileMaker Pro 3.0 CD-ROM.

Folder name	Description	Use to
Support folder	Contains XPLAT, CSA Guide, and TechInfo CD Sampler folders	Browse technical and reference information
XPLAT folder	Contains database design tips for cross-platform files	Copy or read from CD-ROM to learn about using solution files on both the Macintosh and Windows
CSA Guide folder	Directory of Claris Solution Alliance developers	Browse information on Claris Solution Alliance members
TechInfo CD Sampler folder	FileMaker Pro tips	Find technical information about FileMaker Pro
Tools folder	Contains the FM Tools, Examples, Sample SDK Solution (KIOSK on Windows), and Kiosk Sample Solution folder	Browse sample database files for your use
FM Tools	Sample buttons, layouts and FileMaker Pro database files	Browse samples for your use
Examples	Contains sample database files developed in FileMaker Pro 3.0	Browse sample databases for your use
Sample SDK Solution	Contains sample solution file developed in FileMaker Pro 3.0	Browse sample databases for your use
Kiosk Sample Solution	Contains sample solution file bound in kiosk mode	Browse sample databases for your use

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