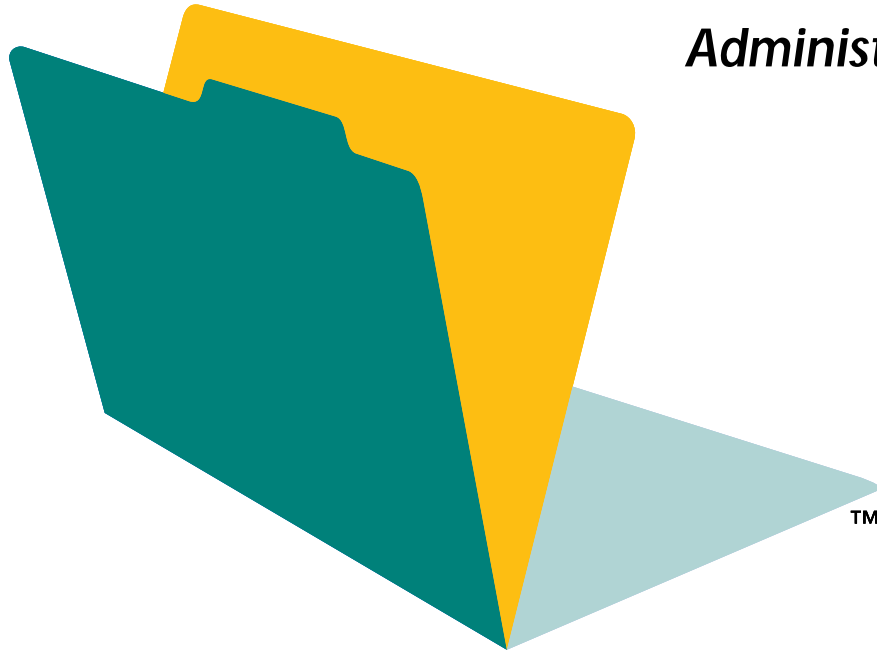


For Windows and Mac

FileMaker[®] Server 5

Administrator's Guide



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Preface

Using the FileMaker Server documentation

The documentation for the FileMaker® Server software provides information, illustrations, and step-by-step instructions to help you learn the most about FileMaker Server—a powerful application that enhances database sharing across a network.

The FileMaker Server documentation includes:

- this book, the *FileMaker Server Administrator's Guide*
- FileMaker Server Help, a comprehensive online help system
- Context-sensitive Help for dialog box options (Windows) and Balloon Help for menu items (Mac OS)

Information on the Web

You can also find more information, tips, and database ideas by visiting FileMaker, Inc. on the Web:

Windows: Choose the Start button > Programs > FileMaker Server 5 > FileMaker on the Web or point your browser to www.filemaker.com.

Mac OS: While running FileMaker Server, choose Help menu > FileMaker on the Web or point your browser to www.filemaker.com.

About this guide

The *FileMaker Server Administrator's Guide* and FileMaker Server Help are written for administrators of the Windows NT, Windows 2000, and Mac OS operating systems. In many instances, information and instructions are the same for all three operating systems. In these sections and topics, any platform-specific information, such as the name of a command, is followed by the name of the platform in parentheses. For example:

In the Properties (Windows) or Preferences (Mac OS) dialog box, click the Administration tab, and choose one of the following options.

Information marked (Windows) applies to both Windows NT and Windows 2000. Information marked for one of these operating system versions alone indicates the information is version-specific.

Where instructions are significantly different, you see separate sections or topics for each operating system. Windows NT information appears first, followed by information for Windows 2000, and then information for the Mac OS.

A note about the illustrations

Illustrations throughout the book are mixed, depicting situations for both platforms. Windows NT 4.0 and Mac OS 8.6 systems were used for these illustrations. What you see on your screen may vary from the instructions in this book depending on the platform and operating system of your computer.

Using FileMaker Server Help


FileMaker Server onscreen Help is available when you are working in the FileMaker Server console (Windows) or when you are working with the FileMaker Server application (Mac OS) locally, which run on the server computer.

If you are administering FileMaker Server remotely (from another computer on your network), you can use the Help accessed through the Remote Administration window. For more information, see “Getting Help while administering FileMaker Server remotely” on page xi.


Starting FileMaker Server Help

Whenever you open FileMaker Server Help, you start the Windows Help application (Windows) or the FileMaker Help Viewer application (Mac OS). These help applications run independently of FileMaker Server.

To start FileMaker Server Help when you're working in the FileMaker Server console (Windows) or FileMaker Server application (Mac OS), do one of the following:

- Windows: Press F1, click  on the toolbar, or choose Action menu > Help.

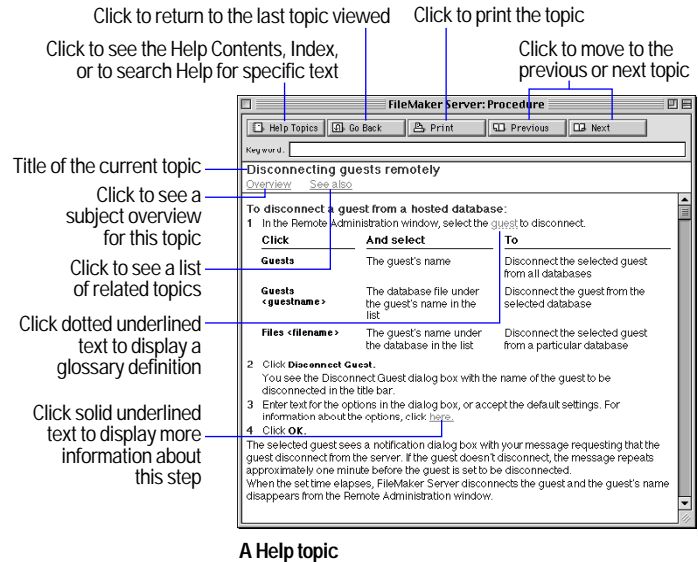
The topic you see is dependent on whether FileMaker Server or Schedules is selected in the Console Tree (left pane of the FileMaker Server console). The Help topic displayed is specific to the area of FileMaker Server you are working with.

- Mac OS: Choose FileMaker Server Help from the Help menu, press the Help key, or press .

The topic you see is dependent on the window or dialog box that is open. The Help topic displayed is specific to the area of FileMaker Server you are working with.

About the Help topic window

To navigate to other topics in FileMaker Server Help, you click buttons and underlined text in the Help topic window.



A Help topic

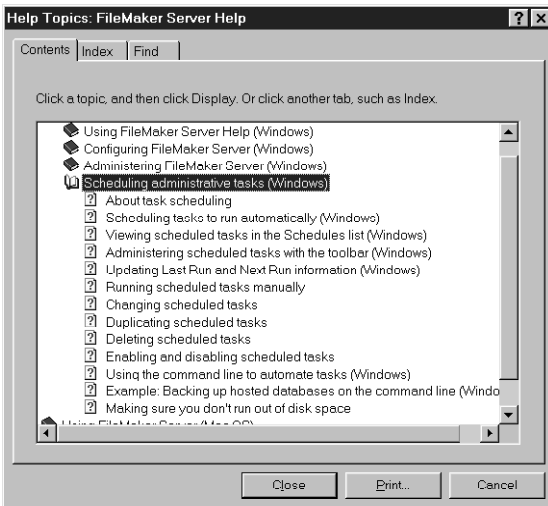
For specific information about using FileMaker Server Help—such as printing a Help topic—review the Help topics on using onscreen Help.

Finding a topic using the Help Contents

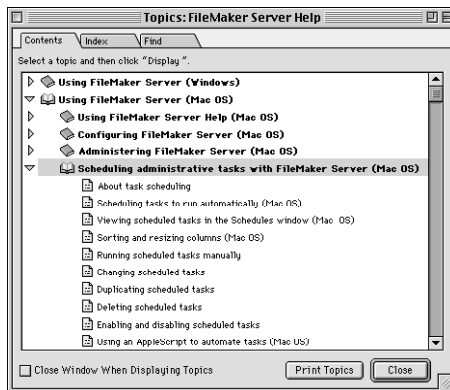
Windows: In the FileMaker Server console, choose Action menu > Help, then click Help Topics.

Mac OS: In FileMaker Server, choose Help menu > Contents and Index.

If a FileMaker Server Help topic is displayed, click Help Topics in the Help topic window, then click Contents (if necessary) to display the Help Contents.



Help Contents in FileMaker Server Help (Windows)



Help Contents in FileMaker Server Help (Mac OS)

When you open the FileMaker Server Help Contents, you see a list of Help subjects, like the table of contents in a book. Double-click a book icon to display a list of topics for each subject. Then double-click a topic to display the Help topic window.

Finding a topic using the Help Index

FileMaker Server Help includes an alphabetical list of index entries—significant words and phrases—to help you find the topics containing the information you want. Each index entry is associated with one or more topics.

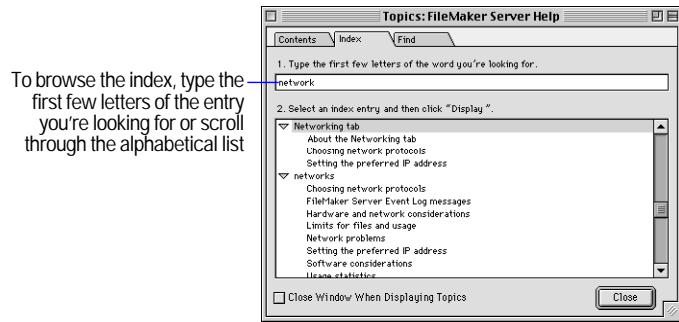
To use the Help Index:

1. **Windows:** In the FileMaker Server console, choose Action menu > Help, click Help Topics, then click Index (if necessary).
- Mac OS: In FileMaker Server, choose Help menu > Contents and Index, then click Index (if necessary).
2. In the Index window, type all or part of an index entry you want to find.

1. Type the first few letters of the word you're looking for.

network

The Help Index displays a list of entries beginning with the characters you typed. Under some index entries is a list of more than one Help topic.



Help Index (Mac OS)

3. Double-click an entry to display a list of topic choices (Windows) or the topic itself.

Finding a topic using specific words

You can specify your own significant word or combination of words to search for within all of the Help topics. FileMaker Server Help will display a list of all topics containing the word(s) you specify and the total number of topics found. To narrow the search, you can specify a combination of words. For example, you can search for all topics containing both the word “performance” and the word “statistics.”

To find a topic based on a specific word or group of words:

1. Windows: In the FileMaker Server console, choose Action menu > Help, click Help Topics, then click the Find tab.

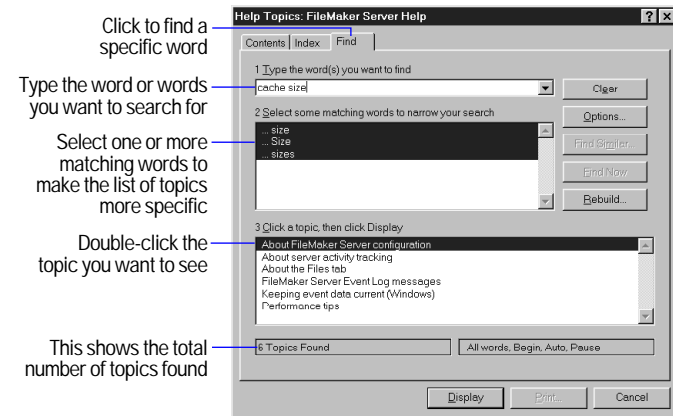
The first time you click Find in FileMaker Server Help, the Find Setup Wizard dialog box appears. Follow the instructions it provides to set up FileMaker Server Help for finding words. This setup procedure needs to be done only once.

Mac OS: In FileMaker Server, choose Help menu > Contents and Index, then click the Find tab.

2. In the Find window, type the word that you want to search for.

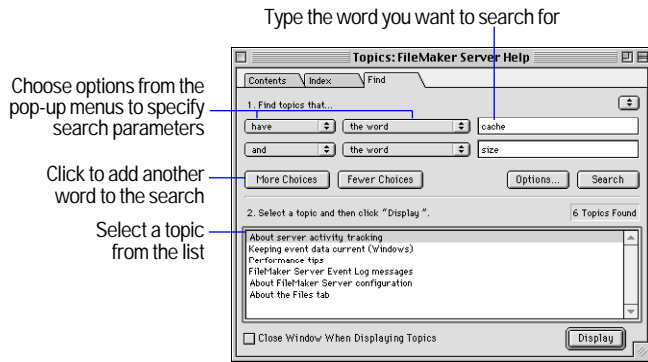
3. To narrow the search, do one of the following:

Windows: Type more than one word in the text box. Then click Options, select All the words you typed in any order, select Immediately after each keystroke to begin the search, then click OK. You can also select multiple words to search for by Ctrl-clicking them in the matching word list.



Finding words in FileMaker Server Help (Windows)

Mac OS: Click More Choices and type a second word in the new row below the first word. Then click Search. You can add multiple rows and choose different parameters from the pop-up menus for each word.



Finding words in FileMaker Server Help (Mac OS)



4. Select a topic in the topic list, then click Display.

FileMaker Server Help shows each occurrence of the word or words you searched for in the Help topic window.

Finding information about specific items in FileMaker Server


As you're working in FileMaker Server, you can find information about a dialog box that's open or certain items your mouse is pointing to, depending on the platform you're using.

Windows: For context-sensitive Help, do one of the following:

- Select FileMaker Server or Schedules in the Console Tree (left side of the FileMaker Server console) and choose Action menu > Help. You can also press F1, or click  on the toolbar.
- Right-click FileMaker Server or Schedules in the Console Tree and choose Help.
- In the upper-right corner of a dialog box, click , then click an item in the dialog box to find out about it.
- Rest the pointer over a menu name or toolbar item and read its description in a pop-up window.


- Rest the pointer over a menu command and read its description in the lower left corner of the console.

Mac OS: For context-sensitive Help, do one of the following:

- Some windows and dialog boxes have context-sensitive Help. To access it, open a dialog box and press the Help key, choose Help menu > FileMaker Server Help, or press  + ?. The Help topic for that dialog box opens. If a Help topic does not appear or the FileMaker Server Help command is dimmed in the Help menu, context-sensitive Help is not available for the open window or dialog box.
- Choose Help menu > Show Balloons and then point to a menu, or select a menu and drag to display a description of each menu item.
- Choose Help menu > Show Balloons, select a pop-up menu in a dialog box, and drag to display a description of each item in the list.

Getting Help while administering FileMaker Server remotely

The onscreen Help for FileMaker Server is installed on the server computer, so you can't access it when you are administering or monitoring FileMaker Server activity from another computer.

To get help for remote administration tasks while working in the Remote Administration window, click  in the Remote Administration window.

To close the Help window and return to the Remote Administration window, click Done.

Chapter 1

Welcome to FileMaker Server 5

Welcome to the FileMaker Server 5 application for Windows NT, Windows 2000, and the Mac OS from FileMaker, Inc.

FileMaker Server gives you enhanced file sharing capabilities on your network when used with the FileMaker Pro 5 database management application.

Registration and customer support

Please take the time to complete and mail the registration card for your product or register online:

- Windows: In the FileMaker Server console, choose View menu > FileMaker on the Web
- Mac OS: Start FileMaker Server and choose Help menu > FileMaker on the Web
- Point your browser to www.filemaker.com/register

For information about technical support and customer service, see:

www.filemaker.com (North American customers)
www.filemaker.com/intl (customers outside North America)

or choose:

Windows: View menu > FileMaker on the Web

Mac OS: Help menu > FileMaker on the Web

At the web site, you will find the FileMaker, Inc. Service Directory, which details the service options available to North American customers, as well as links to FileMaker, Inc. international sites, answers to frequently asked questions, and access to extensive software libraries used by the technical support staff. If you do not have access to the Web, please refer to the Technical Support and Customer Service sheet included in the software box. North America customers can also call 1-800-965-9090 to learn about the service options available.

Introducing FileMaker Server

You've always been able to share database files in FileMaker Pro using a peer-to-peer sharing scheme with the Multi-User command. You can also use the FileMaker Server application as a *dedicated host* to open FileMaker Pro 5 files and make them available to FileMaker Pro guests on your network, allowing better performance among more guests. FileMaker Server acts only as a host, and uses advanced client/server technology to take care of much of the background work associated with managing files, thereby enhancing performance for FileMaker Pro guests accessing those files.

FileMaker Server can host up to 125 database files and support up to 250 simultaneously connected FileMaker Pro guests. (AppleTalk support is limited to 124 simultaneous guests.)

FileMaker Server 5 includes a new *remote administration* capability. Remote administration lets you easily monitor and administer hosted databases and guests and track statistical information from a computer running FileMaker Pro 5.

Avoid installing FileMaker Server on a computer that is a user's primary workstation or network file server. FileMaker Server should be run on a dedicated computer reserved for use as a database server.

When FileMaker Server is hosting many guests or a large number of database files, it uses a high level of processor, hard disk, and network capacity. Other processor-intensive applications (for example, Web-server or disk-backup software) or heavy network traffic on the same computer will cause FileMaker Server to run more slowly and degrade the performance of FileMaker Pro on guest computers.

In addition, file sharing should be turned off on the computer running FileMaker Server.

Note This guide assumes you're familiar with general database concepts as well as the basics of FileMaker Pro. If you're not, refer to the tutorial in the *FileMaker Pro 5 Getting Started Guide* or to the *FileMaker Pro 5 User's Guide* (especially the first two chapters) for more information.

How does FileMaker Server work?

The FileMaker Server application is a tool to use with FileMaker Pro 5 in a network environment to:

- enhance database guest performance
- increase the number of FileMaker Pro guests who can connect to a file hosted by FileMaker Server
- increase the number of files that can be hosted by FileMaker Server
- host files using more than one network protocol simultaneously

You can use the remote administration capability of FileMaker Server to administer the server software from a different computer on your network. When administering remotely, you can:

- open—or *host*—a FileMaker Pro database file, making it available to FileMaker Pro guests on the network
- view information *about* the files being hosted, like the number of guests accessing each database
- send messages to connected guests
- close a hosted FileMaker Pro file, making it unavailable to FileMaker Pro guests
- disconnect a selected FileMaker Pro guest from a particular hosted file or all hosted files

Some of these administrative tasks require that you install the Server Administration plug-in for FileMaker Server on your remote computer. For more information about installing the plug-in, see:

- “Installing the Server Administration plug-in on a remote computer running Windows” on page 2-6
- “Installing the Server Administration plug-in on a remote computer running the Mac OS” on page 3-5

For more information about administering remotely, see chapter 5, “Administering FileMaker Server.”

When you start FileMaker Server, it automatically opens and hosts all multi-user FileMaker Pro 5 files located in the same folder (or the first level of subfolders) as the FileMaker Server application. This common folder architecture lets you easily set up the database files that you always want FileMaker Server to host on the network.

Keep in mind the following points about the different uses of FileMaker Server and FileMaker Pro:

- Use FileMaker Server to open and host FileMaker Pro files that you want to make available to FileMaker Pro guests on your network.
- As a dedicated host, FileMaker Server *only* hosts the files. FileMaker Server can't access or modify the information in the files.
- Use FileMaker Pro to create database files or modify the structure of existing files (for example, to password-protect each hosted FileMaker Pro file or to access field definitions).

The FileMaker Web Companion feature of FileMaker Pro can be used to publish files hosted by FileMaker Server on the World Wide Web or a company's intranet. For more information about web publishing, see the documentaiton for FileMaker Developer, FileMaker Pro, or FileMaker Pro Unlimited.

What's in the FileMaker Server package

The FileMaker Server package includes:

Package component	Description
FileMaker Server CD-ROM	The Setup application (Windows), the Start Here application (Mac OS), as well as all the files you need to use FileMaker Server
<i>FileMaker Server Administrator's Guide</i>	This guide. Installation instructions and information about how to use FileMaker Server
FileMaker registration card	Information to register your copy of FileMaker Server

What's new or improved in FileMaker Server 5

The new and improved features of FileMaker Server include:

- Added support for up to 250 simultaneous guests (AppleTalk support is limited to 124 simultaneous guests)
- Ability to host up to 125 files simultaneously
- Automatic disconnection of guests who have been idle for a period of time you specify
- Ability to host single user files without having to change them to multi-user using FileMaker Pro
- Ability to set the frequency with which the cache is flushed
- Ability to specify a preferred IP address for FileMaker Server communication
- Ability to set the sampling frequency for usage statistics collection
- Ability to set a preferred size for the statistics log file, used for performance monitoring
- Improved detail in logged messages

Windows

- Ability to automatically open and host runtime database solution files by registering non-.fp5 filename extensions
- Ability to use the Windows Event Viewer to monitor FileMaker Server activities
- Usage statistics monitoring in the Windows Performance Monitor
- Ability to schedule automatic backups of hosted databases using the FileMaker Server console
- Ability to sort and resize columns in the Schedules list
- Better performance through improved asynchronous I/O support

Mac OS

- User interface improvements to both the Administration and Schedules windows that provide more room for viewing hosted files, guest information, and scheduled tasks. You can also resize columns, maintain your selection in the active window, and sort by column.
- Ability to specify a preferred size for the Event Log file, which records server activity
- Ability to see network protocol settings (AppleTalk, TCP/IP, or both) in the Administration window
- Support for the following additional Apple events: get statistics, list users, list schedules, and run schedules
- Ability to set a preferred cache size
- Notification when you change configuration preferences that require increased application memory. FileMaker Server suggests a new memory allocation that you can accept or decline. The new memory setting takes effect after you restart FileMaker Server.

Before you begin

Before you begin the installation process, quit other open programs, and turn off virus protection utilities. For instructions on installing FileMaker Server, see chapter 2, “Installing FileMaker Server in Windows” or chapter 3, “Installing FileMaker Server in the Mac OS.”

Chapter 2

Installing FileMaker Server in Windows

This chapter provides step-by-step instructions for installing FileMaker Server and associated files on a computer using the Windows NT 4.0 or Windows 2000 operating system.

What you need

To use FileMaker Server, you need the following equipment and software.

Intel-Pentium compatible systems

To use FileMaker Server on Intel-Pentium and compatible systems, you need:

- an Intel compatible PC with a Pentium or later processor
- at least 32 MB of installed RAM (Windows NT) or 64 MB of installed RAM (Windows 2000)
- one of the following operating system software configurations:
 - Windows NT Server 4.0 or later or Windows NT Workstation 4.0 or later (10 or fewer users only) and Windows NT Service Pack 3, 4, or 5. See the End User License Agreement that came with the Windows NT operating system for more information concerning the allowed number of connections.
 - Windows 2000 Server or Windows 2000 Professional (10 or fewer users only)
- Microsoft Management Console (MMC) 1.1 or later (installed by the FileMaker Server Installer if not already installed on your computer)
- Internet Explorer 4.01 or later

- FileMaker Pro 5 for running the remote administration capability and for creating and converting databases to be hosted by FileMaker Server 5. FileMaker Server 5 supports only FileMaker Pro 5 databases.

- a login account with administrative privileges for installing FileMaker Server

- a CD-ROM disk drive

- a hard disk with at least 4 MB free disk space for the FileMaker Server files. Be sure to allow additional space for the database files you intend to host, which should be located on the same disk as the FileMaker Server application.

Important Up to 20 MB of free disk space may be required during the installation process.

Networking requirements

To share files among users on a network, you need to have the following additional software and hardware installed on the host computer running FileMaker Server:

- a Windows NT or Windows 2000 compatible network card. If you want to specify a preferred IP address for FileMaker Server, a second network card is required. For more information, see “Setting the preferred IP address” on page 4-9.
- the software driver for your network card
- NWLink IPX/SPX Compatible Transport and/or TCP/IP network protocol for Windows NT or Windows 2000

Guests can use the following network protocols to access database files hosted by FileMaker Server:

Network protocol	Windows guest	Mac OS guest
IPX/SPX	NWLink IPX/SPX Compatible Transport (Windows NT client)	IPX is not supported
	Microsoft IPX/SPX Compatible Transport (Windows 95 or Windows 98 client)	
TCP/IP	TCP/IP	Apple Open Transport 1.1.1 (or later)

Important FileMaker Server uses a proprietary networking scheme and operates independently of your network operating system (NOS) access privileges. Multi-user FileMaker Pro databases will be available to FileMaker Pro guests regardless of NOS privileges. To restrict access to FileMaker databases, use the access privileges available in FileMaker Pro 5. For more information, see “Protecting files with a password” on page 4-11. Database files should be shared using networking available in FileMaker Pro. Do not share FileMaker Pro files using Windows file sharing.

Installing FileMaker Server

Use the Setup program to install FileMaker Server on your hard disk. This installation procedure describes how to install the:

- FileMaker Server application and supporting files
- FileMaker Server example files

By default, the Setup program creates a folder named FileMaker Server 5 in the Program Files\FileMaker\ folder on your hard disk, then installs FileMaker Server and example files in it. However, you can choose a different location during installation.

To install FileMaker Server on your hard disk:

1. Exit all other applications and turn off virus protection utilities.
2. Insert the FileMaker Server CD-ROM into your CD-ROM drive.
3. Double-click the Read Me icon to read important information about this release of FileMaker Server. Then close the Read Me file.
4. Double-click setup.exe.

You see the Welcome screen of the FileMaker Server Setup Wizard.

5. Click Next.
 6. Read the license agreement, select I accept the terms in the License Agreement, then click Next.
 7. Personalize this copy of FileMaker Server by typing your name, organization name, and indicate who can access FileMaker Server from this computer (only you or anyone who uses the computer). Then click Next.
 8. Choose Complete in the Setup Type screen to install FileMaker Server and the example files, then click Next.
- Note** If you don’t have enough disk space on the server computer, you see the Out of Disk Space dialog box. Quit the installation, remove files from the installation volume to free some space, and try again.
9. Select an option for FileMaker Server start-up, then click Next.

Select	If you want FileMaker Server to start
Automatic	Whenever Windows starts. Note After installation, you must start the FileMaker Server service manually the first time. For more information, see “Starting FileMaker Server (Windows NT)” on page 2-4 or “Starting FileMaker Server (Windows 2000)” on page 2-5. Thereafter, FileMaker Server will start when you restart the computer.
Manual	After you turn on the FileMaker Server service in the Services control panel (Windows NT) or Services console (Windows 2000). For more information, see “Starting FileMaker Server (Windows NT)” on page 2-4 or “Starting FileMaker Server (Windows 2000)” on page 2-5.

10. Type your installation code, then click Next.

Your installation code is located on a card in the FileMaker Server product box, or on the FileMaker Server installation CD-ROM envelope.

11. If the Microsoft Management Console (MMC) software is not installed on your server computer, the Setup Wizard will prompt you to install it now. The installation of MMC can take several minutes and you can't cancel this installation once it has begun. If you want to install MMC and continue the installation of FileMaker Server, click Next.

12. Click Install to begin FileMaker Server file installation.

The Setup Wizard installs FileMaker Server 5 and the example files.

13. Click Finish to close the Setup Wizard. Remember to turn virus protection utilities back on.

See “Starting FileMaker Server (Windows NT)” on page 2-4 or “Starting FileMaker Server (Windows 2000)” on page 2-5 for information about starting FileMaker Server the first time.

Note To administer FileMaker Server from a remote computer (open files, close files, and so on), you must install the Server Administration plug-in on each remote computer you plan to use for remote administration. For more information, see “Installing the Server Administration plug-in on a remote computer running Windows” on page 2-6 or “Installing the Server Administration plug-in on a remote computer running the Mac OS” on page 3-5.

Where files are stored on your hard disk

The following table describes the FileMaker Server files that are installed on your hard disk.

File	Description	Default location
fmserver.exe	FileMaker Server service	hard_drive:\Program Files\
fmpsmesg.dll	FileMaker Server message resource (required by Event Viewer)	FileMaker \FileMaker Server 5
fmserver.msc	FileMaker Server console (MMC saved console)	
fmserver.dbg	FileMaker Server debug symbol file (required by the Dr. Watson debugger)	
fmpsprop.dll	FileMaker Server properties component (MMC snap-in)	
fmpsschd.dll	FileMaker Server Task Scheduler component (MMC snap-in)	
fmpsmema.dll	Performance Monitor support	
fmpsperf.dll	FileMaker Server component required by the Performance Monitor	
fmshelp.hlp	FileMaker Server onscreen Help	
fmshelp.cnt	FileMaker Server onscreen Help Contents	
fmshelp.gid	Support files for FileMaker Server onscreen Help	
fmshelp.fts	Support files for FileMaker Server onscreen Help	
readme.wri	Text file containing important information about this release of FileMaker Server	
Go_FileMaker.html	HTML document for FileMaker on the Web	
fms_logo.gif	Graphic file of FileMaker Server logo for the FileMaker on the Web document	

File	Description	Default location
Sample batch files	Sample template scripts to use for running backups on the command line	<i>hard_drive</i> :\Program Files\FileMaker \FileMaker Server 5 \Examples
fmpctrnm.h	Used for manual setup of FileMaker Server Performance Monitor support	<i>hard_drive</i> :\Program Files\FileMaker \FileMaker Server 5 \Perfctr
fmpsperf.ini	Used for manual setup of FileMaker Server Performance Monitor support	<i>hard_drive</i> :\Program Files\FileMaker \FileMaker Server 5 \Perfctr
mmc.exe	Microsoft Management Console application	<i>system_root</i> \System32

Notes

- The FileMaker Server Installer installs MMC files on the server computer, if MMC is not already installed. In this situation, a few MMC-related files are installed in the System32 and Help folders on your server computer in addition to the files listed in the table.
- When you install the Server Administration plug-in on a remote computer, the plug-in is installed in the System folder inside the FileMaker Pro 5 folder on the remote computer. For more information, see page 2-6.

Starting FileMaker Server (Windows NT)

To start the FileMaker Server service:

1. Place the FileMaker Pro 5 files that you want FileMaker Server to open—or shortcuts to those files—in the same folder as FileMaker Server (or in subfolders one level down).

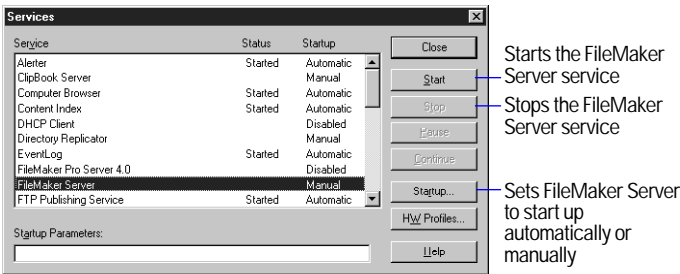
Up to 125 FileMaker Pro 5 database files can be automatically opened when FileMaker Server starts up.
2. Click the Start button > Settings > Control Panel.

3. Double-click the Services icon.



4. Select FileMaker Server in the list, then click Start.

FileMaker Server opens the FileMaker Pro files for access by FileMaker Pro 5 guests on the network.



Services control panel (Windows NT)

Note The Services control panel also lets you change how FileMaker Server starts: either manually or automatically. If you want to start FileMaker Server manually when Windows restarts, click the Startup button, then click Manual. If you want FileMaker Server to start automatically when Windows restarts, click the Startup button, then click Automatic.

For information about starting the FileMaker Server service from the command prompt, see “Using the command line to automate tasks (Windows)” on page 6-6.

Starting FileMaker Server (Windows 2000)

To start the FileMaker Server service:

1. Place the FileMaker Pro 5 files that you want FileMaker Server to open—or shortcuts to those files—in the same folder as FileMaker Server (or in subfolders one level down).

Up to 125 FileMaker Pro 5 database files can be automatically opened when FileMaker Server starts up.

2. Click the Start button > Settings > Control Panel.

3. Open the Administrative Tools folder.

4. Double-click the Services icon.

5. Select FileMaker Server in the list.

6. Choose Action menu > Start.

FileMaker Server opens the FileMaker Pro files for access by FileMaker Pro 5 guests on the network.

For information about starting the FileMaker Server service from the command prompt, see “Using the command line to automate tasks (Windows)” on page 6-6.

Stopping FileMaker Server (Windows NT)

Stopping the FileMaker Server service disconnects all FileMaker Pro guests and closes all database files hosted by FileMaker Server.

To stop FileMaker Server:

1. Click the Start button > Settings > Control Panel.

2. Double-click the Services icon.

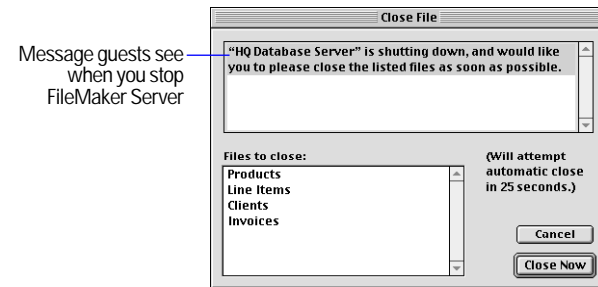


3. Select FileMaker Server in the list, then click Stop.

4. Click Yes in the confirmation dialog box if you're sure you want to stop the service.

FileMaker Server gives guests five minutes to close files before disconnecting them. Guests see a notification dialog box requesting that they close the files hosted by FileMaker Server.

If guests don't close the files, the dialog box reappears one minute before the files are closed.



Shut down notification dialog box on Mac OS guest computer

After five minutes, FileMaker Server disconnects any remaining guests and begins closing all open files.

Completing the process of stopping the service and closing the files may take several minutes.

Important Stop the FileMaker Server service before shutting down Windows to give FileMaker Server adequate time to alert guests and prepare to shut down.

Stopping FileMaker Server (Windows 2000)

Stopping the FileMaker Server service disconnects all FileMaker Pro guests and closes all database files hosted by FileMaker Server.

To stop FileMaker Server:

1. Click the Start button > Settings > Control Panel.
2. Open the Administrative Tools folder.
3. Double-click the Services icon.
4. Select FileMaker Server in the list, then choose Action menu > Stop.

Installing the Server Administration plug-in on a remote computer running Windows

To have full administrative capabilities when administering FileMaker Server from a remote computer (a computer that is not running the server software), you must install the Server Administration plug-in on each remote computer you plan to use for remote administration.

In addition to viewing information about databases, guests, and FileMaker Server activities, the plug-in also lets you use a remote computer to:

- open FileMaker Pro 5 files for access by FileMaker Pro guests through FileMaker Server
- close files hosted by FileMaker Server
- disconnect a selected FileMaker Pro guest from one or all hosted files
- send messages to guests of hosted files

This section describes how to install the Server Administration plug-in on Windows based remote computers. For instructions on installing the plug-in on a remote computer running the Mac OS, see page 3-5.

Note The plug-in does not get installed during a Complete installation. You must install it separately using the Custom installation option in the FileMaker Server Installer.

Before you can use FileMaker Pro 5 to administer files hosted by FileMaker Server, you must use FileMaker Pro to enable the Server Administration plug-in (see page 2-7) and use FileMaker Server to enable remote administration (see page 4-6).

For information about using remote administration, see chapter 5, “Administering FileMaker Server.”

Installing the plug-in on a remote computer running Windows NT

1. Exit all other applications and turn off virus protection utilities.
2. Install FileMaker Pro 5 on the remote computer, if it's not already installed.
3. Insert the FileMaker Server CD-ROM into your CD-ROM drive.
4. Double-click setup.exe.

You see the FileMaker Server Setup Wizard.

5. Click Next.
6. Read the license agreement, select I accept the terms in the License Agreement, then click Next.
7. Type your name and organization, and indicate who can access FileMaker Server from this computer (only you or anyone who uses the computer). Then click Next.
8. Select Custom, then click Next.

You see the Custom Setup screen in the Setup Wizard.

9. Click the disk icon to the left of FileMaker Server 5 and choose This feature will not be made available.

10. Click the disk icon to the left of FileMaker Server Examples and choose This feature will not be made available.

11. Click the disk icon to the left of FileMaker Server Remote Administration and choose This feature will be installed on local hard drive, then click Next.

12. Click Install.

The Installer installs the plug-in (fmgsadm.fmx) on your hard disk.

The Installer checks if FileMaker Pro 5 is installed on the remote computer. If the Installer finds FileMaker Pro 5, it uses the FileMaker Pro 5 path as the default location for the Server Administration plug-in. If FileMaker Pro 5 is not found, the Installer sets the default installation path to:

Program Files\FileMaker\FileMaker Pro 5\System

13. Click Finish to close the Setup Wizard.

Installing the plug-in on a remote computer running Windows 95 or Windows 98

1. Exit all other applications and turn off virus protection utilities.

2. Install FileMaker Pro 5 on the remote computer, if it's not already installed.

3. Insert the FileMaker Server CD-ROM into your CD-ROM drive.

4. Double-click setup.exe.

You see the FileMaker Server Setup Wizard.

5. Click Next.

6. Read the license agreement, select I accept the terms in the License Agreement, then click Next.

7. Type your name and organization, then click Next

You see the Custom Setup screen in the Setup Wizard.

8. Click the disk icon to the left of FileMaker Server Remote Administration and choose This feature will be installed on local hard drive, then click Next.

9. Click Install.

The Installer installs the plug-in (fmgsadm.fmx) on your hard disk.

The Installer checks if FileMaker Pro 5 is installed on the remote computer. If the Installer finds FileMaker Pro 5, it uses the FileMaker Pro 5 path as the default location for the Server Administration plug-in. If FileMaker Pro 5 is not found, the Installer sets the default installation path to:

Program Files\FileMaker\FileMaker Pro 5\System

10. Click Finish to close the Setup Wizard.

Enabling the Server Administration plug-in using FileMaker Pro (Windows)

To enable the Server Administration plug-in:

1. Start FileMaker Pro 5.

2. Click Cancel in the New Database dialog box.

3. Choose Edit menu > Preferences > Application.

4. Click the Plug-ins tab, select Server Administration, then click OK.

If you want to administer FileMaker Server now, see “Enabling remote administration” on page 4-6 and “Opening the Remote Administration window” on page 5-2. Otherwise, choose File menu > Exit to exit FileMaker Pro.

Uninstalling FileMaker Server (Windows)

Should you need to remove FileMaker Server from your computer, you must first stop the FileMaker Server service. For more information, see “Stopping FileMaker Server (Windows NT)” or “Stopping FileMaker Server (Windows 2000)” on page 2-6.

To remove FileMaker Server from your computer:

1. Start Windows.
2. Click the Start button > Settings > Control Panel.
3. Double-click the Add/Remove Programs icon.

You see the Add/Remove Programs Properties dialog box.

4. Select FileMaker Server 5, then click the Add/Remove button.

You see the FileMaker Server 5 Setup Wizard.

5. Click Next.
6. Select Remove, click Next, then click Remove again.

The Uninstaller removes the FileMaker Server files from the hard disk. After all the files are removed, a final dialog box tells you FileMaker Server was removed successfully.

7. Click Finish and then OK to close the Add/Remove Programs Properties dialog box.

Chapter 3

Installing FileMaker Server in the Mac OS

This chapter provides step-by-step instructions for installing the FileMaker Server application and associated files on your Mac OS computer.

What you need

To use FileMaker Server, you need the following equipment and software.

Mac OS system requirements

To use FileMaker Server, you need:

- any Apple Power Macintosh or compatible computer, running Mac OS 8.6 or later. FileMaker Server runs in native mode on a Power Macintosh.
- FileMaker Pro 5 for running the remote administration capability and for creating and converting databases to be hosted by FileMaker Server 5. FileMaker Server 5 supports only FileMaker Pro 5 databases.
- a web browser for accessing FileMaker on the Web information from the Help menu
- a CD-ROM disk drive
- 32 MB of available system memory (RAM). For information about running FileMaker Server with virtual memory turned on, see “FileMaker Server, virtual memory, and physical memory requirements” on page 3-3.
- an internal or external hard disk drive with at least 4 MB of free disk space to install the FileMaker Server application and all related files. Be sure to allow additional space for the database files you intend to host, which should be located on the same disk as the FileMaker Server application.

Networking requirements

To share files among users on a network, you can use AppleTalk or TCP/IP networking. TCP/IP is recommended for best performance. Apple Open Transport 2.0.1 (or later) is required on the computer running FileMaker Server.

Guests can use the following network protocols to access database files hosted by FileMaker Server:

Network protocol	Mac OS guest	Windows guest
AppleTalk	Apple LocalTalk (provided by your system) or Apple EtherTalk (Phase I or II)	AppleTalk isn't supported on FileMaker Pro 5 running in Windows
TCP/IP	Apple Open Transport 1.1.1 (or later)	Microsoft TCP/IP-32

Installing FileMaker Server

Use the Installer to install the complete FileMaker Server package on your hard disk. The Installer creates a folder called FileMaker Server 5.

To install FileMaker Server on your hard disk:

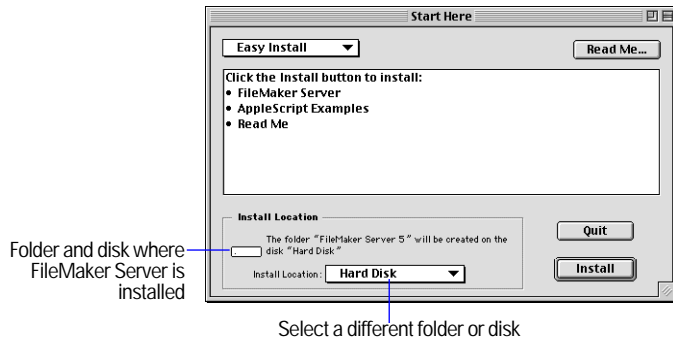
1. Quit all other applications, especially virus protection software, and disable file sharing.
 2. Insert the FileMaker Server CD-ROM into your CD-ROM drive.
- You see the CD window on your screen. If you see only the disc icon, double-click the icon to open its window.

3. Double-click the Installer icon named Start Here.



4. Read the license agreement, then click Accept.

You see the FileMaker Server Installer dialog box.



5. To install the application onto a different disk or into a specific folder, click the Install Location pop-up menu and choose Select Folder. In the dialog box that appears, choose a destination disk and folder, then click Select.

6. Click Install.

7. Type your name, company name (optional), and your installation code.

Your installation code is located on a card in the FileMaker Server product box, or on the FileMaker Server installation CD-ROM envelope.

8. Click OK.

If the hard disk you chose has enough space, the Installer begins installing files.

9. Click Quit to leave the Installer when the installation is finished.

10. If you turned off virus protection and file sharing before installing, turn them back on now.

For information about starting the application, see “Starting FileMaker Server (Mac OS)” on page 3-4.

Note If you want to fully administer FileMaker Server from remote computers (open files, close files, and so on), you must install the Server Administration plug-in on each remote computer you plan to use for remote administration. For more information, see “Installing the Server Administration plug-in on a remote computer running Windows” on page 2-6 or “Installing the Server Administration plug-in on a remote computer running the Mac OS” on page 3-5.

Adjusting memory (Mac OS)

Your computer sets aside a certain amount of memory for each application. When you start FileMaker Server, it tells the computer how much memory it needs.

You can increase the amount of memory (RAM) set aside for FileMaker Server if you want to host large database files or a large number of files.

Changing the amount of memory used

To change the amount of memory reserved for FileMaker Server, keep these points in mind:

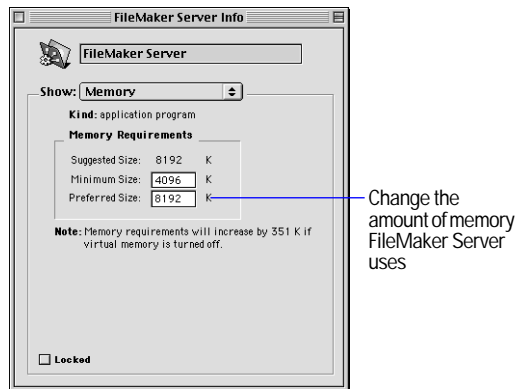
- FileMaker Server comes configured with 8 MB of memory (RAM) allocated to it. This configuration supports the default number of guests (25) and files (50). Increasing memory can speed up overall performance, especially if you are working with large files or a large number of guests or files.
- The amount of memory you give to other applications affects the performance of FileMaker Server. FileMaker Server is designed to run by itself on a dedicated computer. By not running other applications, you can assign all available memory to FileMaker Server.

- Avoid specifying less memory than the Suggested Size in the FileMaker Server Info dialog box.
- If you make changes to FileMaker Server preferences while running FileMaker Server, FileMaker Server asks you if you want to automatically adjust the application memory setting in the FileMaker Server Info dialog box (if needed) to accommodate the new settings. If you click OK in the confirmation dialog box, application memory is adjusted for you. If you click Cancel in the confirmation dialog box, you should use the following procedure to adjust the application memory manually.

See appendix B, “Performance and usage tips” for suggestions for optimizing memory settings.

To change the amount of memory FileMaker Server uses:

1. If FileMaker Server is running, close the application by choosing File menu > Quit.
2. Select the FileMaker Server application icon.
3. Choose File menu > Get Info > Memory.



4. Double-click the number labeled Preferred Size.

5. Type a number to change the memory allocated for FileMaker Server.


6. Click the close box.

The next time you start FileMaker Server, the amount of memory you specified is used by the application.

FileMaker Server, virtual memory, and physical memory requirements

FileMaker Server and the virtual memory option (available with Mac OS 8.6, or later) both use your hard disk to store temporary information. Virtual memory provides file mapping, which can improve the performance of FileMaker Server. If you choose to turn on virtual memory while FileMaker Server is running, ensure that you have enough physical memory to satisfy the requirements of both the Mac OS and FileMaker Server so that virtual memory won't degrade the performance of FileMaker Server.

To determine how much physical memory you need to use FileMaker Server with virtual memory turned on:

1. Click the desktop to switch to the Finder.
2. Choose  > About This Computer and note how much memory the Mac OS is using.
3. Add this figure to the preferred amount of memory FileMaker Server requires (8 MB) to determine how much physical memory you need for optimal performance of FileMaker Server with virtual memory turned on.

Where files are stored on your hard disk

The following table shows the location and contents of the installed items.

File	Description	Preferred location on hard disk
FileMaker Server	FileMaker Server application	FileMaker Server 5 folder
FileMaker Server Apple Events	A FileMaker Pro database that gives an introduction to the Apple events supported by FileMaker Server, so you can control it using AppleScript or similar applications. See the documentation that came with AppleScript or other applications for details on how to send events to FileMaker Server.	FileMaker Server 5 folder:AppleScript Examples:Apple Events Information
FileMaker Help Viewer	Application that displays FileMaker Server onscreen Help	FileMaker Server 5 folder:FileMaker Help
FileMaker Server Help	Onscreen Help for FileMaker Server	
Apple Script files	Sample template scripts to use for running backups in the Schedules dialog box	FileMaker Server 5 folder:AppleScript Examples
Read Me	A text file containing important information about this release of FileMaker Server	FileMaker Server 5 folder
FileMaker on the Web	Alias for Go_FileMaker.html	
Go_FileMaker.html	HTML document source file for FileMaker on the Web	FileMaker Server 5 folder:FMI
FMS_Logo.gif	Graphic file of FileMaker Server logo for the FileMaker on the Web document	

When you install the Server Administration plug-in on a remote computer, the plug-in is installed in the FileMaker Extensions folder inside the FileMaker Pro 5 folder on the remote computer. For more information, see page 3-5.

Starting FileMaker Server (Mac OS)

Start FileMaker Server by double-clicking its icon in the FileMaker Server 5 Folder, or by selecting the icon and choosing File menu > Open.



You can also make an alias to start FileMaker Server automatically each time you start your computer. See the next section for more information.

Making an alias

Previous versions of FileMaker Server automatically put an alias of the application in the Startup Items folder of your System Folder. This caused FileMaker Server to start up whenever you started your computer.

Important Throw away any alias from a previous version of FileMaker Server in your Startup Items folder.

To make an alias for FileMaker Server:

1. In the Finder, select the FileMaker Server icon in the FileMaker Server 5 folder.
2. Choose File menu > Make Alias.

You see an alias of FileMaker Server in the application folder.



3. Copy or drag the alias into the Startup Items folder in your System Folder.

Quitting FileMaker Server (Mac OS)

Quitting FileMaker Server disconnects all FileMaker Pro guests and closes all database files hosted by FileMaker Server.

To quit FileMaker Server:

- 1. Choose File menu > Quit.
- 2. Enter text for disconnection options in the dialog box, or accept the default settings, and then click OK.

For this option	Do this
Message to send	Type text you want the guests to see.
Minutes until guests forced to disconnect	Enter a value (the default is 5 minutes or the last-entered value).

After you select Quit, you see a diamond next to the command in the File menu. In the Local Administration dialog box, all databases or guest names become italicized to show that FileMaker Server is attempting to close all files, disconnect all guests, and quit.

FileMaker Server will give guests five minutes, or the amount of time you specify in the dialog box, to close files before disconnecting them. Guests see a notification dialog box requesting that they close the files hosted by FileMaker Server. If guests don't close the files, the dialog box reappears one minute before the files are closed by FileMaker Server.

It might take FileMaker Server several minutes to complete the process of quitting.

Installing the Server Administration plug-in on a remote computer running the Mac OS

To have full administrative capabilities when administering FileMaker Server from a remote computer (a computer that is not running the server software), you must install the Server Administration plug-in on each remote computer you plan to use for remote administration. The plug-in is available as a custom installation option in the FileMaker Server Installer.

In addition to viewing information about databases, guests, and FileMaker Server activities, the plug-in also lets you use a remote computer to:

- open FileMaker Pro 5 files for access by FileMaker Pro guests through FileMaker Server
- close files hosted by FileMaker Server
- disconnect a selected FileMaker Pro guest from one or all hosted files
- send messages to guests of hosted files

These instructions describe how to install the Server Administration plug-in on a remote computer running the Mac OS. For instructions on installing the plug-in on a Windows based remote computer, see page 2-6.

Note The plug-in does not get installed during an Easy Install. You must install it separately using the Custom installation option in the FileMaker Server Installer. In addition, you must be running Mac OS 7.6.1 or later on the remote computer to install the Server Administration plug-in.

To install the Server Administration plug-in on a computer running the Mac OS:

- 1. Quit all other applications, especially virus protection software, and disable file sharing.

2. Install FileMaker Pro 5 on the remote computer, if it's not already installed.

3. Insert the FileMaker Server CD-ROM into your CD-ROM drive.
You see the CD window on your screen. If you see only the disc icon, double-click the icon to open its window.

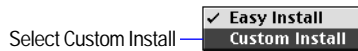
4. Double-click the Installer icon named Start Here.



5. Read the license agreement, then click Accept.

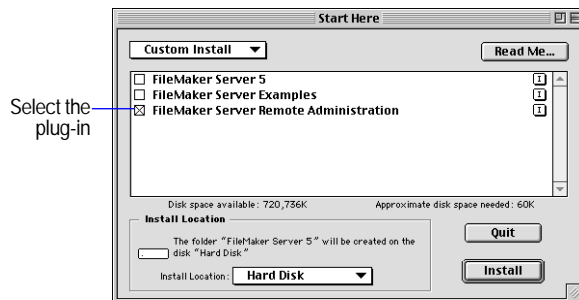
You see the FileMaker Server Installer dialog box.

6. Click Easy Install and select Custom Install.



Note The Easy Install/Custom Install menu does not appear if you are running a version of Mac OS prior to 8.6.

7. Select FileMaker Server Remote Administration.



The plug-in must be installed in the FileMaker Extensions folder in the FileMaker Pro 5 folder. If FileMaker Pro 5 is installed, the FileMaker Server Installer locates this folder on your hard disk and installs the Server Administration plug-in there. If FileMaker Pro 5 is not installed on your computer, the Installer creates the following folder and installs the plug-in here:

hard_disk:FileMaker Server 5 folder:FileMaker Extensions

8. Click Install.

9. Click Quit to leave the Installer when the installation is finished.

10. If you turned off virus protection and file sharing before installation, turn them back on now.

Before you can use FileMaker Pro to administer files hosted by FileMaker Server, you must use FileMaker Pro to enable the Server Administration plug-in (see the next section) and use FileMaker Server to enable remote administration (see page 4-6).

For information about using remote administration, see chapter 5, “Administering FileMaker Server.”

Enabling the Server Administration plug-in using FileMaker Pro (Mac OS)

To enable the Server Administration plug-in:

1. Start FileMaker Pro 5.
2. Click Cancel in the New Database dialog box.
3. Choose Edit menu > Preferences > Application.
4. Click the Plug-ins tab, select Server Administration, then click OK.

If you want to administer FileMaker Server now, see “Enabling remote administration” on page 4-6 and “Opening the Remote Administration window” on page 5-2. Otherwise, choose File menu > Exit to exit FileMaker Pro.

Chapter 4

Configuring FileMaker Server

Configuration settings allow you to customize FileMaker Server for optimal performance at your site.

Windows: Use the FileMaker Server console's configuration assistants or the Properties dialog box to configure FileMaker Server.

Mac OS: Use the Preferences dialog box to configure FileMaker Server.

Configuration settings include:

- setting the maximum number of guests
- setting idle disconnect time and customizing the pre-disconnect message
- setting the maximum number of open files
- allocating the amount of memory (RAM) that FileMaker Server can use as a database cache
- setting how often the database cache is flushed
- allowing single user files to be hosted and shared
- enabling runtime files created using FileMaker Developer software to be opened automatically by FileMaker Server (Windows)
- enabling remote administration and specifying a password
- specifying a custom server name that appears in the FileMaker Pro Hosts dialog box
- maximizing performance (Mac OS)

- specifying the network protocol(s) FileMaker Server will use and choosing a preferred IP address

- enabling usage statistics to be recorded in a log file and setting a maximum size for the log

Note The memory requirements of FileMaker Server are directly related to the number of guests and open files. If you select large values for these, you should also increase the amount of RAM reserved for the database cache. See “Changing the amount of memory used by FileMaker Server” on page 4-4 or “Adjusting memory (Mac OS)” on page 3-2 for more details.

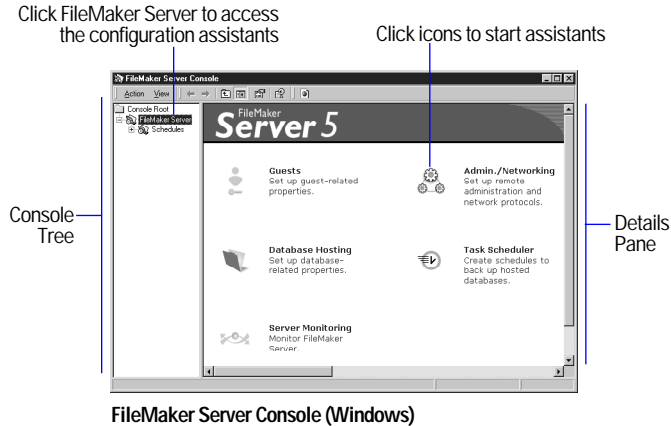
Using the configuration assistants (Windows)

In Windows, FileMaker Server comes with configuration assistants to help you set up server options. These assistants step you through the configuration process, giving you helpful instructions along the way. You can use these assistants to set up your initial configuration, and then use the Properties dialog box as described in this chapter to change settings, if needed.

To access the assistants:

1. Click the Start button > Programs > FileMaker Server > FileMaker Server Console.

You see the FileMaker Server console.



2. Click one of the icons in the right panel to start its assistant.

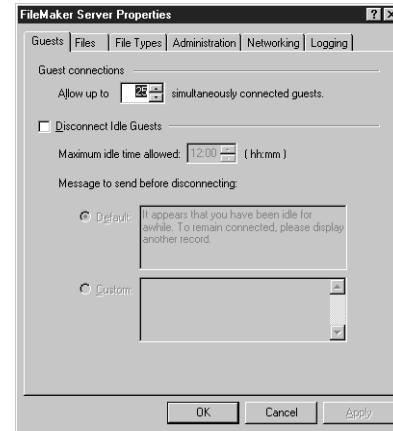
Opening the Properties dialog box (Windows)

1. Click the Start button > Programs > FileMaker Server 5 > FileMaker Server Console.

You see the FileMaker Server console.

2. Select FileMaker Server in the Console Tree, if it's not already selected.
3. Choose Action menu > Properties.

You see the Properties dialog box, which has six tabs: Guests, Files, File Types, Administration, Networking, and Logging.



Properties dialog box (Windows)

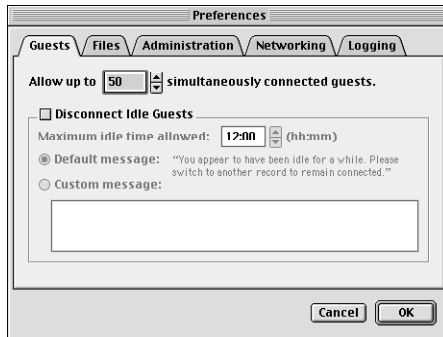
4. Click any tab to set options for FileMaker Server configuration. For configuration details, skip the next section and refer to the remaining sections in this chapter.

Opening the Preferences dialog box (Mac OS)

1. Double-click the FileMaker Server icon to start the application. If FileMaker Server is running, choose Application menu > FileMaker Server in the upper-right corner of the desktop to bring it to the foreground.

2. Choose Edit menu > Preferences.

You see a dialog box with five tabs: Guests, Files, Administration, Networking, and Logging.



Preferences dialog box (Mac OS)

3. Click any tab to set options for FileMaker Server configuration. For configuration details, refer to the remaining sections in this chapter.

Setting the number of guests

You can specify the number of guests who are simultaneously connected to FileMaker Server. Specifying a lower number leaves more memory available for FileMaker Server to operate.

See appendix B, “Performance and usage tips” for more information about memory optimization.

To set the number of FileMaker Pro guests:

1. In the Properties (Windows) or Preferences (Mac OS) dialog box, click the Guests tab.
2. Enter a number for the Allow up to n simultaneously connected guests option.

The minimum number of guests is 1 and the maximum is 250. (AppleTalk support is limited to 124 simultaneous guests.) For example, if you monitor guest usage over time and notice you rarely have more than 22 guests active at one time, set this option to allow 25 guests for best performance on your server.

3. Set any other options, then click OK.

If you increase the number of guests allowed, you must restart FileMaker Server for the new setting to take effect.

Allowing disconnection of idle guests

FileMaker Server can disconnect guests who have been idle for more than a specified period of time. You can:

- specify the amount of time before idle guests are disconnected
- use the default disconnect message to warn guests that they will be disconnected, or write a custom message

Setting a time to disconnect idle guests

FileMaker Server can disconnect guests after a specified amount of idle time.

Tip To avoid being disconnected, guests should periodically show some activity (for example, move to a different record, then click in one of the fields) when working in databases hosted by FileMaker Server.

1. In the Properties (Windows) or Preferences (Mac OS) dialog box, click the Guests tab.
2. Select Disconnect Idle Guests.
3. Click the up or down arrow to select the amount of idle time after which inactive guests should be disconnected. The minimum setting is 30 minutes and the maximum setting is 24 hours.
4. Set any other options, then click OK.

Setting the pre-disconnect message

Before an idle guest is disconnected from a hosted database, FileMaker Server sends the guest a message to warn that disconnection will occur soon. You can send a default message from FileMaker Server or you can type your own message.

To customize the pre-disconnect message:

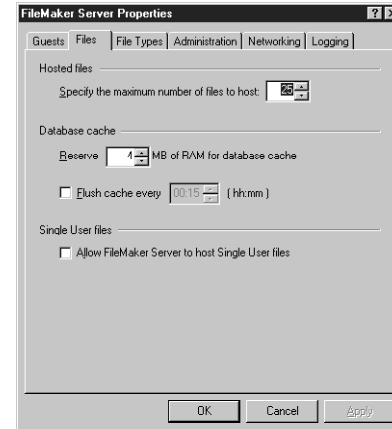
1. In the Properties (Windows) or Preferences (Mac OS) dialog box, click the Guests tab, and select Disconnect Idle Guests.
2. Select Custom message, then type a message in the text box.
3. Set any other options, then click OK.

Setting the maximum number of files

You can specify the maximum number of database files FileMaker Server can open at one time. If you consistently monitor database usage, you can set the maximum number of files for best performance on your server. Specifying a lower number leaves more memory available for FileMaker Server. See appendix B, “Performance and usage tips” for more information about memory optimization.

To set the maximum number of files FileMaker Server can host:

1. In the Properties (Windows) or Preferences (Mac OS) dialog box, click the Files tab.



Files tab (Windows)

2. Enter a number close to the number of files you expect to host on FileMaker Server.

The minimum setting is 1 file and the maximum is 125.

3. Set any other options, then click OK.

If you increase the number of files allowed, you must restart FileMaker Server for the new setting to take effect.

Changing the amount of memory used by FileMaker Server

The operating system sets aside a certain amount of memory for each application. When you start FileMaker Server, it tells Windows or the Mac OS how much memory it needs based on its Reserve *n*MB of RAM for database cache setting. Increasing the RAM reserved for the database cache can speed up overall performance, especially if your server hosts large files or a large number of guests or files.

Mac OS: The amount of application memory specified in the FileMaker Server Info dialog box also affects the operation of FileMaker Server. For more information, see “Adjusting memory (Mac OS)” on page 3-2.

To change the amount of memory FileMaker Server uses:

1. In the Properties (Windows) or Preferences (Mac OS) dialog box, click the Files tab.
2. Enter the amount of RAM you want to allocate in the Reserve *n* MB of RAM for database cache box.

The minimum setting is 2 MB and the maximum is 40 MB.

Important Do not specify more RAM than is physically available on the server computer. Be sure to leave at least 16 to 32 MB (Windows) or 24 MB (Mac OS) of physical RAM available for the operating system.

3. Set any other options, then click OK.

You must restart FileMaker Server for the new setting to take effect.

Setting how often the cache is flushed

FileMaker Server writes (*flushes*) information stored in temporary storage (*the cache*) to disk whenever FileMaker Server is idle, but you can set the cache to be flushed at specific intervals. If the cache is flushed frequently, data integrity in hosted files is improved but performance may decline.

1. In the Properties (Windows) or Preferences (Mac OS) dialog box, click the Files tab.
2. Select Flush cache every *n* minutes or hours.
3. Click the up or down arrow to select the time interval.

The minimum setting is 15 minutes and the maximum setting is 2 hours.

4. Set any other options, then click OK.

Allowing single user files to be hosted

For your convenience, you can set FileMaker Server to host single user files. This setting lets you host databases without first having to manually change them to multi-user in FileMaker Pro.

1. In the Properties (Windows) or Preferences (Mac OS) dialog box, click the Files tab.
2. Select Allow FileMaker Server to host Single User files.
3. Set any other options, then click OK.

Opening runtime solutions automatically (Windows)

You can have FileMaker Server automatically host runtime solution files that have been bound using FileMaker Developer 5 and have a custom filename extension.

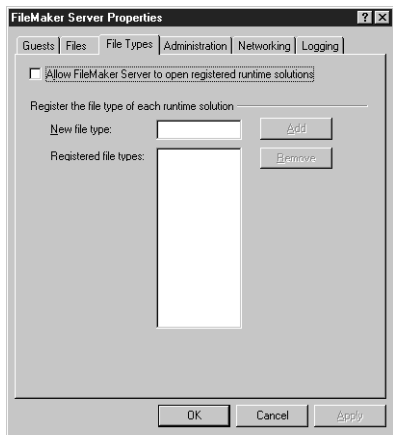
About FileMaker Developer

FileMaker Developer lets database developers create and distribute complete single user database solutions with layouts that are not modifiable by users.

Runtime solution files typically have unique filename extensions. For example, rather than the standard .fp5 extension, a runtime solution file might have the extension .cm1. Registering these runtime solution filename extensions in the FileMaker Server Properties dialog box enables FileMaker Server to open these files automatically when they are placed in the same folder as the FileMaker Server application (or subfolders one level down).

To enable FileMaker Server to open runtime solution files automatically:

1. In the Properties dialog box, click the File Types tab.



File Types tab (Windows)

2. Select Allow FileMaker Server to open registered runtime solutions.
3. To register a filename extension for a runtime solution, type the extension into the top box, then click Add.

You can register a maximum of 16 filename extensions. You can use the following wildcard characters when defining filename extensions.

Use this character	To indicate
*	Zero or more characters. For example, <code>c*</code> registers all extensions that begin with <code>c</code> .
?	One character. For example, <code>c?p</code> registers all extensions that begin with <code>c</code> and end with <code>p</code> , and <code>c?</code> registers all extensions that begin with <code>c</code> and are two characters in length.

4. To remove a filename extension, select it, then click Remove.
5. Set any other options, then click OK.

Opening runtime solutions automatically (Mac OS)

You can have FileMaker Server automatically host runtime solution files that have been bound using FileMaker Developer 5.

About FileMaker Developer

FileMaker Developer lets database developers create and distribute complete single user database solutions with layouts that are not modifiable by users. Users can purchase and use these databases without having to obtain full FileMaker Pro licenses for the computers running the databases.

If runtime solution files were bound using FileMaker Developer running in the Mac OS, they open automatically when FileMaker Server starts if they are located in the FileMaker Server 5 folder (or subfolders one level down).

If runtime solutions files were bound using FileMaker Developer running in Windows, you must open them using FileMaker Pro 5 running in the Mac OS and then close them before placing them in the FileMaker Server 5 folder (or subfolders one level down). Thereafter, these solution files will open automatically when FileMaker Server starts.

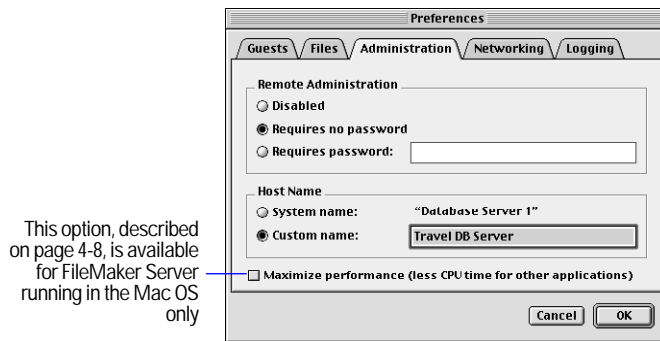
Enabling remote administration

Using FileMaker Pro 5, you can remotely control, or *administer*, FileMaker Server from a different computer than the one on which FileMaker Server is installed and hosting databases. After you enable remote administration, you can view a list of hosted databases, and the guests using them, and monitor performance statistics using the remote computer.

If you have installed the Server Administration plug-in on your remote computer, you can also send messages to guests, disconnect guests, and open or close files remotely. For more information about remote administration tasks, see chapter 5, “Administering FileMaker Server.” For more information about installing the Server Administration plug-in, see page 2-6 for Windows or page 3-5 for the Mac OS.

To enable remote administration of FileMaker Server:

1. In the Properties (Windows) or Preferences (Mac OS) dialog box, click the Administration tab.



Administration tab (Mac OS)

2. Choose one of the following options for remote administration.

Choose	To
Disabled	Disable remote administration
Requires no password	Let any FileMaker Pro 5 guest remotely view statistics or control FileMaker Server
Requires password	Let FileMaker Pro 5 guests remotely view statistics or control FileMaker Server only after entering the password you specify. Passwords are limited to 31 characters.

If you select Disabled, the FileMaker Server name is dimmed (not selectable) when FileMaker Pro guests view it in the Hosts dialog box.

3. Set any other options, then click OK.

Important If you choose to require a password for security reasons, also remember to restrict access to the server computer. Do not put the computer in an insecure room.

In Windows, you can use Windows administrative tools to password-protect a computer. If you do, remember to always log off when leaving the computer unattended.

To prevent guests from viewing or modifying the data, scripts, and layouts in FileMaker Pro, you must create a password in each of the hosted files in FileMaker Pro. See “Protecting files with a password” on page 4-11 for more information.

Specifying a custom host name

You can specify a host name for the computer running FileMaker Server that’s different from the name registered by the operating system. When you define a custom name, guests see this new name when they open the Hosts dialog box in FileMaker Pro and when they administer FileMaker Server remotely.

Note Guests connecting to databases hosted by FileMaker Server might see the host name displayed in different ways. IPX/SPX displays names using only numerals, uppercase characters, underscores (_), and periods (.), and replaces any other characters with underscores. For example, TCP/IP guests would see a server named Mktg’s FileMaker Server exactly as named, but IPX/SPX guests would see the name MKTG_S_FILEMAKER_SERVER. Choose custom and system names carefully to reduce confusion between different protocols.

To specify the host name that is displayed in the Hosts dialog box:

1. In the Properties (Windows) or Preferences (Mac OS) dialog box, click the Administration tab.
2. Choose one of the following options for Host name.

Choose	To
System name	Have FileMaker Server use the name of the computer in the Network control panel (Windows) or File Sharing control panel (Mac OS)
Custom name	Have FileMaker Server use the custom name you specify

Names are limited to 31 characters.

3. Set any other options, then click OK.

You must restart FileMaker Server for the new setting to take effect.

Maximizing performance (Mac OS)

You can specify that FileMaker Server uses more CPU (central processing unit) cycles than any other application installed on your server computer.

Important Do not enable this feature unless your server computer is dedicated to only FileMaker Server and unless FileMaker Server always runs in the foreground. If you switch to the Finder on a computer running FileMaker Server in maximum performance mode, expect Finder response time to be slow.

To maximize performance of FileMaker Server:

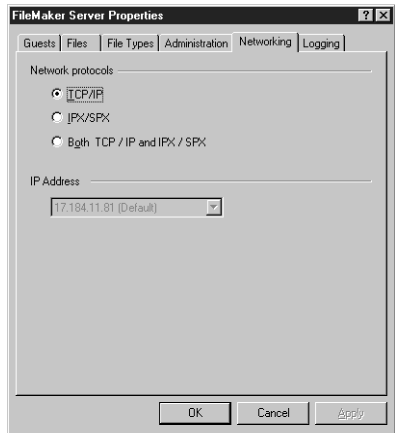
1. In the Preferences dialog box, click the Administration tab.
2. Select Maximize performance (less CPU time for other applications).
3. Set any other options, then click OK.
4. Select FileMaker Server in the Finder menu to ensure that it is running in the foreground.

Choosing network protocols

With FileMaker Server, you can simultaneously host FileMaker databases using TCP/IP and IPX/SPX networks (Windows) or TCP/IP and AppleTalk networks (Mac OS). TCP/IP is highly recommended.

To choose the network protocols FileMaker Server uses:

1. In the Properties (Windows) or Preferences (Mac OS) dialog box, click the Networking tab.



Networking tab (Windows)

2. Click the button for the network protocol(s) you want FileMaker Server to use when communicating with FileMaker Pro guests.

3. Set any other options, then click OK.

You must restart FileMaker Server for the new setting to take effect.

Setting the preferred IP address

If you have multiple IP addresses, you can specify the one you want FileMaker Server to use.

Windows: There is one IP address per network card.

Mac OS: Apple Open Transport determines the number of IP addresses there are for each network card in your computer.

1. In the Properties (Windows) or Preferences (Mac OS) dialog box, click the Networking tab.
2. Select an IP address from the menu.
3. Set any other options, then click OK.

You must restart FileMaker Server for the new setting to take effect.

Recording usage statistics and setting size limits

When you enable statistical logging for FileMaker Server, a file named `fmsvplg.txt` (Windows) or `Server Statistics Log` (Mac OS) is created in your FileMaker Server 5 folder.

Windows: You can view information from this log in the Usage Statistics window when you administer remotely, or you can display it graphically in real-time on your server computer using the Performance Monitor. For more information about viewing statistics, see “Viewing usage statistics for FileMaker Server remotely” on page 5-3 and “Monitoring performance locally (Windows NT)” on page 5-8.

Mac OS: You can view information from this log in the Usage Statistics window when you administer both remotely or locally. For more information, see “Viewing usage statistics for FileMaker Server remotely” on page 5-3 and “Viewing usage statistics locally (Mac OS)” on page 5-11.

Tips

- FileMaker Server saves statistical information in a log file named `fmsvplg.txt` (Windows) or `Server Statistics Log` (Mac OS) in the FileMaker Server 5 folder. This is a tab-delimited text file, so you can import it into, or drag and drop it onto, FileMaker Pro (or any other application that supports tab-delimited input). You can then examine historical statistical information about how FileMaker Server is performing.

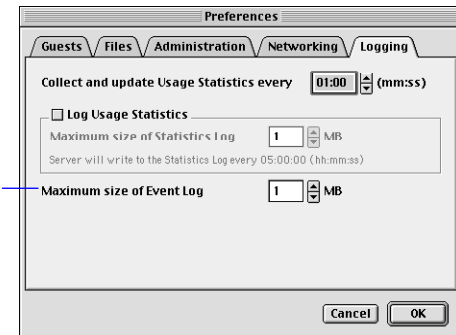
When FileMaker Server is stopped and restarted, the existing log file is renamed `fmsvplas.txt` (Windows) or `Server Last Statistics Log` (Mac OS) and a new one is created to record information for the current session. To save statistics for more than two sessions, rename the backup copy of the log before restarting FileMaker Server or it will be overwritten.

- Mac OS: To display statistical information graphically in real-time, you can use Apple events to transfer information from the `Server Statistics Log` to Microsoft Excel. You can then use Microsoft Excel to chart statistics. For more information about supported Apple events, see the `AppleScript Examples` folder inside the FileMaker Server 5 folder.

To record usage statistics in a log file:

1. In the Properties (Windows) or Preferences (Mac OS) dialog box, click the Logging tab.

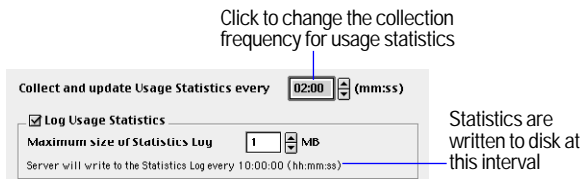
This option, described on page 4-11, is available for FileMaker Server running in the Mac OS only



Logging tab (Mac OS)

2. Select Log Usage Statistics.
3. For Collect and update Usage Statistics every *n* option, select a time interval. The minimum collection interval is 1 second and the maximum is 5 minutes.

FileMaker Server collects statistical information at the interval you have selected and writes it to the log file in the FileMaker Server 5 folder at the interval noted below the Log Usage Statistics option.



The difference between how often data is collected and how often it is written to the log depends on the size of FileMaker Server temporary storage. Holding statistics in temporary storage rather than writing to the log at each collection optimizes performance while still providing useful and timely statistical information.

4. For Maximum size of Statistics Log, select a maximum size in megabytes for the log file. The minimum setting is 1 MB and the maximum is 40 MB.
5. Set any other options, then click OK.

For information on the types of statistics that are collected in the Statistics Log, see “Viewing usage statistics for FileMaker Server remotely” on page 5-3.

Setting a size limit for the application log (Windows NT)

You can set a maximum size for the FileMaker Server application log, which records with a timestamp situations that occur while FileMaker Server is running. Typical events that are logged include FileMaker Server startup and shut down, database file opening and closing, guests logging on and off, tasks that execute on schedules, changes to FileMaker Server properties, and so on.

To set the size of the application log for FileMaker Server:

1. Click the Start button > Programs > Administrative Tools (Common) > Event Viewer.
2. Choose Log menu > Log Settings.
3. For Maximum Log size *n*, select a maximum size in kilobytes for the FileMaker Server application log.
4. Click OK.

Tip You might want to overwrite data when the log is full so you always have current events in the log. For more information, see “Keeping event data current (Windows)” on page 5-15.

Setting a size limit for the application log (Windows 2000)

You can set a maximum size for the FileMaker Server application log, which records with a timestamp situations that occur while FileMaker Server is running. Typical events that are logged include FileMaker Server startup and shut down, database file opening and closing, guests logging on and off, tasks that execute on schedules, changes to FileMaker Server properties, and so on.

To set the size of the application log for FileMaker Server:

1. Click the Start button > Settings > Control Panel.

2. Open the Administrative Tools folder.
3. Double-click the Event Viewer icon.
4. Choose Action menu > Properties.
5. For Maximum Log size *n*, select a maximum size in kilobytes for the FileMaker Server application log.
6. Click OK.

Tip You might want to overwrite data when the log is full so you always have current events in the log. For more information, see “Keeping event data current (Windows)” on page 5-15.

Setting a size limit for the Server Event Log (Mac OS)

You can set a maximum size for the Server Event Log, which records with a timestamp situations that occur while FileMaker Server is running. Typical events that are logged include FileMaker Server startup and shut down, database file opening and closing, guests logging on and off, tasks that execute on schedules, and changes to FileMaker Server preferences.

To set the size of the Event Log:

1. In the Preferences dialog box, click the Logging tab.
2. For Maximum size of Event Log, select a maximum size in megabytes.

The minimum size setting for the Server Event Log is 1 MB and the maximum is 40 MB.

3. Set any other options, then click OK.

Protecting files with a password

It is especially important to use the access privileges in FileMaker Pro when files are shared on a network. Using FileMaker Pro, you can restrict what users see and do in a database file by defining *passwords* and *groups*. Passwords limit what users can do and groups limit the layouts and fields they can see.

Important Protect shared FileMaker Pro 5 files by using FileMaker Pro access privileges. Although the shared FileMaker Pro files reside on a file server, which may have its own security scheme, any files available to FileMaker Pro guests bypass network and file server protection. For more information about protecting files with a password, see the *FileMaker Pro 5 User's Guide*.

How FileMaker Server behaves during system sleep

Windows 2000 supports Power Conservation mode, which can cause your server computer to sleep (hibernate or enter Standby mode), suspending access to hosted databases. Computers running the Mac OS can suspend operation when they enter an energy-saving system sleep state.

To prevent your system from sleeping unexpectedly:

- Windows 2000: Disable Hibernation and Standby Mode in the Power options control panel on the computer running FileMaker Server.
- Mac OS: Disable system sleep in the Energy Saver control panel by setting the slider control to Never in the Put the system to sleep whenever it's inactive.

If sleep is enabled on the computer running FileMaker Server, it's important to understand how FileMaker Server reacts, should the computer enter sleep mode:

- If there are no guests connected to hosted files when the operating system notifies FileMaker Server that it is going to sleep, FileMaker Server flushes the cache to disk and leaves hosted databases open. Because the cache is saved to disk before the computer sleeps, hosted databases experience no data loss and are open when the operating system wakes up.

Note Database backups or scripts scheduled in FileMaker Server do not run while the operating system is sleeping.

- If there are guests connected to FileMaker Server when the operating system notifies FileMaker Server that it is going to sleep, FileMaker Server responds to the operating system, instructing that it should not sleep while FileMaker Server is running.

If the operating system shuts down unexpectedly while guests are connected and before the cache can be written to disk (for example, because the battery is critically low, the computer is overheating, or a user turns off the server computer in an emergency), FileMaker Server attempts to recover the state of hosted files when it restarts. As it opens the files located in the FileMaker Server 5 folder (or subfolders one level down), FileMaker Server performs a consistency check on each file. If a file is found to be corrupt, FileMaker Server logs a corruption event in the application log (Windows 2000) or Server Event Log (Mac OS).

Important Files that were open but are not located in the FileMaker Server folder (or subfolders one level down) are not reopened or checked for consistency.

Whenever FileMaker Server restarts after sleep or a forced shutdown, you should always check the application event log (Windows 2000) or Server Event Log (Mac OS) for database corruption notifications. For more information about viewing the events, see “Viewing activities in the Event Viewer (Windows 2000)” or “Viewing activities in the Server Event Log (Mac OS)” on page 5-15.

Also, check your scheduled tasks to ensure that important backups or scripts were not scheduled to run while the operating system was asleep or off. These tasks will not run until the next scheduled time when FileMaker Server is running and the operating system is awake.

To find out the last time a scheduled task ran:

1. Open the FileMaker Server console (Windows 2000) or bring FileMaker Server to the foreground (Mac OS).
2. Click Schedules in the FileMaker Server Console Tree (Windows) or choose Window menu > Schedule Window (Mac OS).
3. Look at the time and date displayed in the Last Run column.

Chapter 5

Administering FileMaker Server

You can view information about guests and control database files hosted by one or more servers from a different computer than the one running FileMaker Server. This process is called *remote administration*.

With FileMaker Server running in the Mac OS, you can also control the hosted files and guests using the same computer that's running FileMaker Server. This process is called *local administration*.

Administering FileMaker Server remotely

The remote administration capability in FileMaker Server is provided through three FileMaker Pro 5 databases. These databases are created in the server computer's temporary directory when you enable remote administration in the Administration Properties (Windows) or Preferences (Mac OS) dialog box, or when you start FileMaker Server (if remote administration is already enabled).

The databases are created in a subdirectory named Remote Administration, which appears as an active folder when you view the Folders tab of the Remote Administration window. Likewise, the remote administration databases appear when you view the Files tab in the Remote Administration window. However, the remote administration databases do not appear in the Hosts dialog box when you use FileMaker Pro 5 to view hosted files on your server computer.

The names of the remote administration databases contain the name of the FileMaker Server computer. The computer name is truncated if it exceeds 31 characters when combined with the name of a remote administration database. This name defaults to the computer's system name, but you can change the name displayed in the Hosts dialog box using the Administration Properties (Windows) or Preferences (Mac OS) dialog box.

For example, if your FileMaker Server computer is named Database Server, you see the following filenames:

- Database Server_Admin
- Database Server_Usage
- Database Server_Data

If you disable remote administration in FileMaker Server or you stop or quit FileMaker Server, the remote administration databases are removed from the server computer. If remote administration is enabled in the Administration Properties (Windows) or Preferences (Mac OS) dialog box when you restart FileMaker Server, the remote administration files are recreated.

Important FileMaker, Inc. does not recommend running FileMaker Pro to view the remote administration databases on the server computer. Always administer a Windows-based server from a remote computer and use local administration when working directly on a Mac OS-based server.

When you administer FileMaker Server remotely, your administration capabilities are limited depending on whether or not the Server Administration plug-in for FileMaker Pro is installed on the remote computer.

If the Server Administration plug-in is not installed on the remote computer, you can:

- view a list of folders that contain database files hosted by FileMaker Server
- view a list of database files hosted by FileMaker Server and the number of guests connected to each
- view a list of all guests and the database files that they are connected to
- view usage statistics for FileMaker Server

If the Server Administration plug-in is installed on the remote computer, you can also:

- open FileMaker Pro files for access by FileMaker Pro guests through FileMaker Server
- close files hosted by FileMaker Server
- disconnect a selected FileMaker Pro guest from one or all hosted files
- send messages to guests of hosted files
- display detailed information about hosted files and guests

For more information about installing the Server Administration plug-in on a remote computer, see “Installing the Server Administration plug-in on a remote computer running Windows” on page 2-6 or “Installing the Server Administration plug-in on a remote computer running the Mac OS” on page 3-5.

Opening the Remote Administration window

Note FileMaker Pro 5 must be installed on the remote computer before you can administer FileMaker Server remotely.

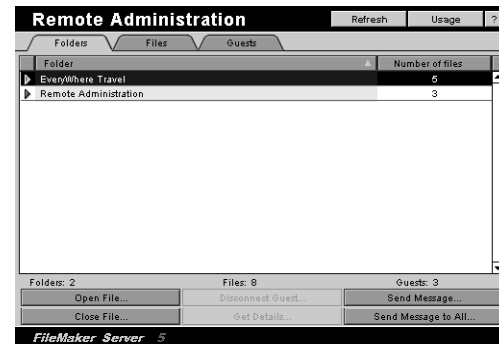
To administer FileMaker Server remotely:

1. Log on to a Windows client computer or a computer running the Mac OS located on the same network as your FileMaker Server computer.
2. Click the Start button > Programs > FileMaker Pro 5 (Windows) or double-click the FileMaker Pro 5 application icon (Mac OS).
3. Choose File menu > Open, and then click Hosts.
4. Select the name of your FileMaker Server in the list of hosted databases, then click Open.

Tip For information on changing the name that appears in the list, see “Specifying a custom host name” on page 4-7.

5. Type the remote administration password, if you are prompted to enter it.

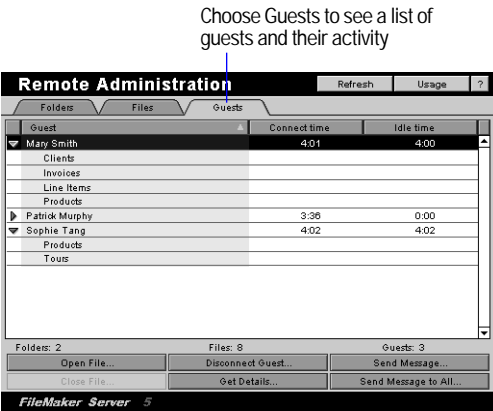
You see the FileMaker Server Remote Administration window.





For remote administration details, refer to the following sections. For information about getting onscreen Help for the Remote Administration window, see “Getting Help while administering FileMaker Server remotely” on page xi.

Listing hosted files and current guests remotely

Remote administration gives you several ways to list information about hosted databases and the guests accessing them.



Click this tab To see

Folders	A list of folders on the computer running FileMaker Server that contain hosted databases and the number of databases in each folder. Click  to display the database files located in a folder.
Files	A list of the database files hosted by FileMaker Server, regardless of which folder they are located in. Also included is the status (for example, Closing, Pausing, Paused, Disk Full, or Exclusive) and the number of guests connected to each database.
Guests	A list of FileMaker Pro guests logged onto the database files hosted by FileMaker Server. Also included is the length of time guests have been connected and their inactive time. Click  next to guest names to view a list of databases that they are connected to.

Tips

- You can see a summary of all folders containing databases, the number of all databases, and the number of all guests just below the list no matter which tab is displayed.
- You can sort information in columns by clicking the column heading. The triangle in the selected column heading indicates the sort order: up for ascending (A–Z, 0–n, or shortest to longest for time durations) or down for descending (Z–A, n–0, or longest to shortest for time durations).
- Mac OS: To view database and guest information while working on the server computer, see “Listing hosted files and guests locally (Mac OS)” on page 5-9.

Viewing usage statistics for FileMaker Server remotely

When you administer remotely, you can display usage statistics, such as how FileMaker Server is performing and how many guests are logged into FileMaker Server.

To display usage statistics for FileMaker Server, click Usage in the Remote Administration window.

You see the Usage Statistics window.

Click to reverse the sort order

Type	Current	Average	Peak
Transactions	4	0	11
Network KB/sec	0	0	1
Guests	3	3	3
Files	8	8	8
Disk KB/sec	1	0	9
Cache Unsaved %	0	0	0
Cache Hit %	100	100	100

The following statistics are listed in the Usage Statistics window:

Statistic	Description
Transactions/ second	Number of guest requests handled per second.
Network (Kbytes/sec)	Amount of data being moved across the network or to and from disk. Data is measured in KB unless network activity is greater than 10 MB per second. In that case, the value displayed represents MB per second.
Guests	Number of connected guests. Use this information to help configure the Allow up to <i>n</i> simultaneously connected guests option.
Files	Number of open databases. Use this information to configure the Maximum number of files to host option.
Disk (Kbytes/sec)	Amount of data being written to disk. Data is measured in KB unless data written to disk is greater than 10 MB per second. In that case, the value displayed represents MB per second.
Cache Unsaved %	Percentage of cache that is currently unsaved. This should be a relatively low number, such as 0 or 5, so you won't lose data if you experience a system crash. If the number is consistently high, consider increasing the frequency with which the cache is flushed.
Cache Hit %	Percentage of the times FileMaker Server retrieved data from the cache (RAM) rather than the hard disk. Reading data from RAM is much more efficient than rereading it from the hard disk, so this value should be a high number, like 90 or 95. If it isn't, you might need to allocate more memory to FileMaker Server database cache.

By default, FileMaker Server updates the statistics in the Usage Statistics window every 15 seconds or less but no more than once a second. Although this reduces the overhead required to calculate the statistics, it means the statistics are approximations of how FileMaker Server is using resources. For information about where usage statistics are stored and how to display them in a chart, see “Recording usage statistics and setting size limits” on page 4-9.

Tip In Mac OS, you can also collect usage statistics information by using Apple events. For more information about Apple events, see the Apple Events Information folder in the AppleScript Examples folder inside the FileMaker Server 5 folder.

Mac OS: To view usage statistics while working on the server computer, see “Viewing usage statistics locally (Mac OS)” on page 5-11.

Hosting FileMaker Pro 5 files remotely

Important FileMaker Server 5 supports only FileMaker Pro 5 databases. Therefore, any existing databases you have from a previous version of FileMaker Pro must be converted to FileMaker Pro 5 format before you can host them using FileMaker Server 5.

When FileMaker Server starts, it automatically opens or *hosts* all multi-user files in the FileMaker Server 5 folder including those in subfolders one level down. It also opens single user files, if you have enabled the Allow FileMaker Server to host Single User files option in the Files tab of the Properties (Windows) or Preferences (Mac OS) dialog box. For more information, see “Allowing single user files to be hosted” on page 4-5. Don't use personal file sharing to share FileMaker Pro files.

Note To open database files while administering remotely, you must have the Server Administration plug-in for FileMaker Pro installed on the remote computer. For Windows remote computers, see “Installing the Server Administration plug-in on a remote computer running Windows” on page 2-6. For Mac OS remote computers, see “Installing the Server Administration plug-in on a remote computer running the Mac OS” on page 3-5.

To open files remotely while FileMaker Server is running:

1. Click Open File in the Remote Administration window.

You see a dialog box with a list of FileMaker Pro 5 files available for hosting.

2. Choose a database in the Select a database list, then click OK.

FileMaker Server opens the file, and the database name appears in the list in the Remote Administration window (if you are viewing database information in the list).

Tips

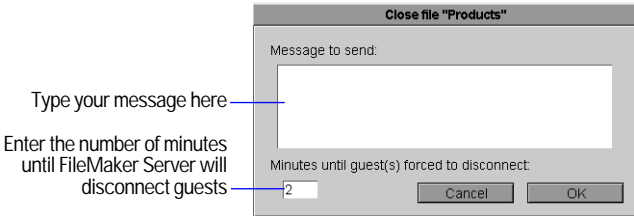
- You can use the Multi-User (Hidden) command in FileMaker Pro 5 to prevent subordinate related files from appearing in the Hosts dialog box. For more information, see the *FileMaker Pro 5 User's Guide*.
- Windows: You can also open a file by dragging a FileMaker Pro 5 file icon and dropping it on the FileMaker Server application icon (fmserver.exe) or by using the command prompt. See “Using the command line to automate tasks (Windows)” on page 6-6 for more information.
- Mac OS: You can also open a file by dragging a FileMaker Pro 5 file icon onto the FileMaker Server application icon or onto the local administration window, or you can use Apple events to open files. To host files while working on the server computer, see “Hosting FileMaker Pro 5 files locally (Mac OS)” on page 5-11. For more information about Apple events, see the FileMaker Server Apple Events folder in the FileMaker Server 5 folder.

Closing hosted files remotely

To close a database and disconnect any guests accessing it:

1. In the Remote Administration window, choose the Folders or Files tab (if it's not already selected) to display a list of open databases.
2. Select a file or folder in the list.
3. Click Close File.

You see the Close File dialog box with the name of the file or folder to be closed in the title bar.



4. Enter text for the options in the dialog box, or accept the default message and settings.

For this option	Do this
Message to send	Type text you want the guests to see in addition to the standard FileMaker Pro message (asking guests to close the database file).
Minutes until guest forced to disconnect	Enter a value (the default is 5 minutes or the last-entered value).

5. Click OK.

If the Files tab is displayed, the Status of the files being closed changes to indicate that FileMaker Server has begun closing files.

Guests see a notification dialog box with your message requesting they close their connection to a file. If guests don't close the file, the message repeats approximately one minute before the file is set to be closed by FileMaker Server.

When the set time elapses, FileMaker Server disconnects any remaining guests and closes the file or files in the folder. The file or folder name no longer appears in the Remote Administration window.

Completing the process of closing a folder, a large database file, or a file with many connected guests may take several minutes.

Tips

- Windows: You can also close files from the command line. See “Using the command line to automate tasks (Windows)” on page 6-6 for more information.
- Mac OS: You can also close files using Apple events. For more information about Apple Events, see the AppleScript Examples folder in the FileMaker Server 5 folder.
- Mac OS: To close files while working on the server computer, see “Closing hosted files locally (Mac OS)” on page 5-12.

Disconnecting guests remotely

To disconnect a guest from a hosted database:

1. In the Remote Administration window, select the guest to disconnect.

Click	And select	To
Guests	The guest's name	Disconnect the selected guest from all databases
Guests <i>guestname</i>	The database file under the guest's name in the list	Disconnect the guest from the selected database
Files <i>filename</i>	The guest's name under the database in the list	Disconnect the selected guest from a particular database

2. Click Disconnect Guest.

You see the Disconnect Guest dialog box with the name of the guest to be disconnected in the title bar.

3. Enter text for the options in the dialog box, or accept the default settings.

For this option	Do this
Message to send	Type text you want the guest to see in addition to the standard FileMaker Pro message (the default).
Minutes until guest forced to disconnect	Enter a value (the default is 5 minutes or the last-entered value).

4. Click OK.

The selected guest sees a notification dialog box with your message requesting that the guest disconnect from the server. If the guest doesn't disconnect, the message repeats approximately one minute before the guest is set to be disconnected.

When the set time elapses, FileMaker Server disconnects the guest and the guest's name disappears from the Remote Administration window.

Mac OS: To disconnect guests while working on the server computer, see “Disconnecting guests locally (Mac OS)” on page 5-13.

Viewing detailed information about hosted files and guests remotely

If you have the Server Administration plug-in installed on your remote computer, you can use FileMaker Pro 5 to view detailed information about hosted files and the guests that are currently connected to them. For each hosted database, you can display:

- the name of the file
- the number of guests connected to it
- the number of records it contains
- the number of layouts it has
- its current size in bytes
- file status: Normal (active), Closing, Pausing, Paused, Nearly full, Exclusive by *username*

For each guest, you can display:

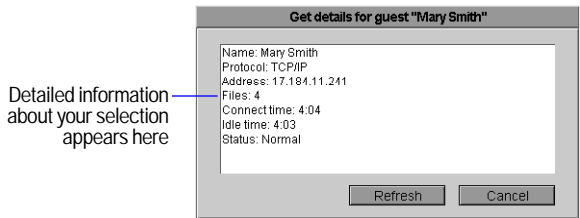
- the name of the guest
- the network protocol that the guest is using
- the guest's network address
- the number of files the guest is currently connected to

- the length of time in days, hours, and minutes that the guest has been connected
- the length of time in days, hours, and minutes that the guest has been idle
- guest status: Normal or Closing

To display detailed information about hosted files and guests:

1. Select a file or guest in the Remote Administration window.
2. Click Get Details.

You see the Get Details dialog box showing detailed information for the file or guest.



Sending messages to guests remotely

To send a message at any time to one or more guests:

1. In the Remote Administration window, make a selection.

Select	To send a message to
A database file	All guests of the database
A folder	Guests of the databases in the folder
A guest	One guest

2. Click Send Message.

You see the Send Message dialog box with the name of the selected recipient(s) in the title bar.



3. For Message to send, type your message, and then click OK.
FileMaker Server sends the message to the selected recipient(s).

Windows: You can also send a message to guests while working on the server computer by scheduling a Send Message task. For more information, see chapter 6, “Scheduling administrative tasks with FileMaker Server.”

Mac OS: To send a message to guests while working on the server computer, see “Sending messages to guests locally (Mac OS)” on page 5-13.

Sending messages to all guests remotely

To send a message to all guests currently accessing any hosted databases:

1. In the Remote Administration window, click Send Message to All.
You see the Send Message to all guests dialog box.
2. For Message to send, type your message, then click OK.

Administering FileMaker Server locally

If you're running FileMaker Server in Windows, you must use the remote administration capability from a different computer (not the one running FileMaker Server) to perform most administrative tasks. However, you can monitor usage statistics from the server computer using the Performance Monitor (Windows NT) or Performance console (Windows 2000). For more information, see the next section, "Monitoring performance locally (Windows NT)," or "Monitoring performance locally (Windows 2000)" on page 5-9.

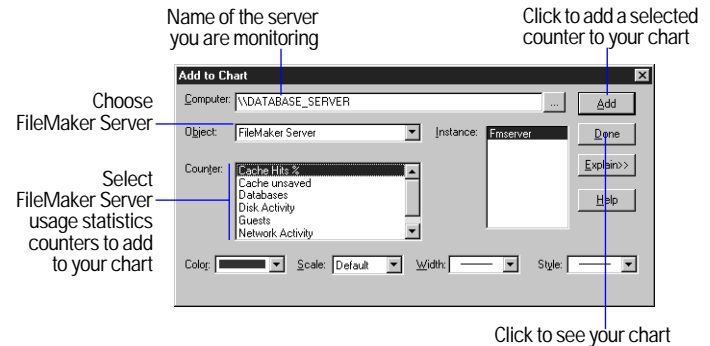
If you're running FileMaker Server in the Mac OS, you can perform all the administrative activities described in the previous sections in this chapter from the computer running the server software. The steps you follow, however, are different and are described beginning on page 5-9. In addition, you can perform many administrative tasks using Apple events both from the local computer or a remote computer. For more information about Apple events, see the AppleScript Examples folder inside the FileMaker Server 5 folder.

Monitoring performance locally (Windows NT)

Using the Windows Performance Monitor, you can chart real-time statistics for various aspects of FileMaker Server performance.

To view FileMaker Server statistics in Windows Performance Monitor:

1. Click the Start button > Programs > Administrative Tools (Common) > Performance Monitor.
2. Choose Edit menu > Add To Chart.



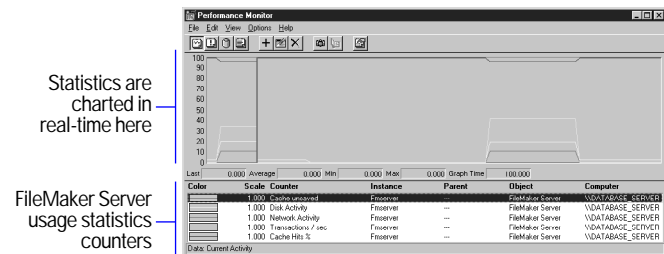
3. For Object, choose FileMaker Server.

4. For Counter, choose the FileMaker Server statistics that you want to track, then click Add after each selection.

Tip Transactions, Network KB/sec, Disk KB/sec, Cache Hit %, and Cache Unsaved % give you the most information about how your system is performing.

5. Click Done.

Real-time statistical information for FileMaker Server appears in the Performance Monitor.



Windows Performance Monitor

For information about the statistics displayed, see "Viewing usage statistics for FileMaker Server remotely" on page 5-3.

Note You can use the Performance Monitor on a Windows client computer or the Performance console on a Windows 2000 client computer to view usages statistics for FileMaker Server remotely when the server is also a Windows computer.

Monitoring performance locally (Windows 2000)

Using the Windows Performance console, you can chart real-time statistics for various aspects of FileMaker Server performance.

To view FileMaker Server statistics in Windows Performance console:

1. Click the Start button > Settings > Control Panel.
2. Open the Administrative Tools folder.
3. Double-click the Performance icon.
4. Select System Monitor in the Console Tree.
5. Click the + button on the toolbar.

You see the Counters dialog box.

6. Click Select counters from computer, then choose the server computer from the list.

7. Click All counters (to chart all FileMaker Server usage statistics) or click Select counters from list and choose the statistics you want to chart, clicking Add after each selection.

Tip Transactions, Network KB/sec, Disk KB/sec, Cache Hit %, and Cache Unsaved % give you the most information about how your system is performing.

8. Click Close.

Real-time statistical information for FileMaker Server appears in the Performance console. For information about the statistics displayed, see “Viewing usage statistics for FileMaker Server remotely” on page 5-3.

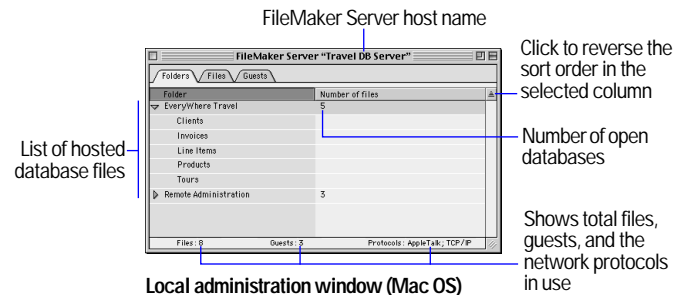
Note You can use the Performance Monitor on a Windows NT client computer or the Performance console on a Windows 2000 client computer to view usages statistics for FileMaker Server remotely when the server is also a Windows computer.

Opening the local administration window (Mac OS)

To open the FileMaker Server local administration window:

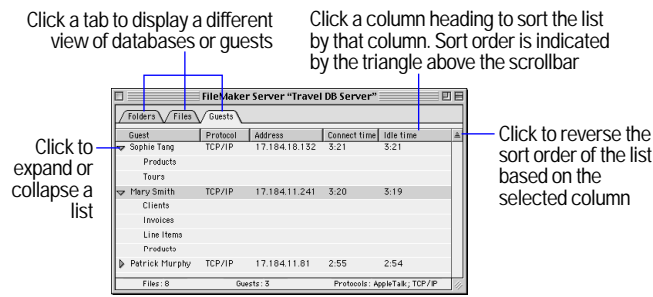
1. Start FileMaker Server.
2. Choose Window menu > Administration Window.

You see the FileMaker Server administration window.



Listing hosted files and guests locally (Mac OS)

The local administration window lists hosted databases and the guests who are using them. You can choose to display information by folder, files (databases), or guest.



Click this tab To see

Folder	A list of the database files hosted by FileMaker Server grouped by the folder in which they reside. Also included is the number of files in each folder.
Files	A list of the database files hosted by FileMaker Server. Also included is the status (Open, Opening, Closing, Backing up, and so on) and the number of guests connected to each database.
Guests	A list of FileMaker Pro guests accessing the database files hosted by FileMaker Server. Also included is the network protocol used by each guest, each guest's network address, length of time guests have been connected, and their inactive time.

Sorting and resizing columns (Mac OS)

You can sort information in a list by column or you can change the width of a column to display more text.

To sort items in a list, click a column heading.

The column heading darkens and the triangle control above the scrollbar indicates the current sort order of the selected column.

This symbol Indicates the selected column is sorted in



Ascending order (A–Z, 0–n, or shortest to longest for time durations)




Descending order (Z–A, n–0, or longest to shortest for time durations)

To reverse the sort order in the selected column, click the triangle control.

The sort order in each tabbed screen is retained when you click between Folders, Files, and Guests.

To unsort the list, click the heading of the sorted column to deselect it.

To resize the width of a column, place the pointer over a column heading border. When the pointer changes to , drag it horizontally.

Selecting information and scrolling in lists (Mac OS)

The following table describes keyboard shortcuts for selecting and scrolling information in lists.

Use this shortcut	To do this
Click an entry	Select a row
Double-click an entry	Switch to the tab for that entry and scroll to display the selected entry in the new tabbed screen. For example, if you double-click a filename in the Folders tab, the display changes to the Files tab and scrolls to show the file.
Shift-click another entry	Extend the current selection
⌘-click another entry	Deselect the entry, if it was selected, or select the entry without including entries between it and your original selection
↑	Select the row above the current selection

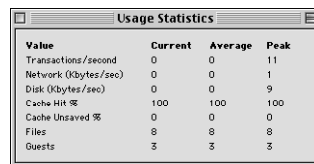
Use this shortcut	To do this
↓	Select the row below the current selection
Shift-↑ or Shift-↓	Extend the current selection
⌘-↑ or ⌘-↓	Select the first or last entry in a list
⌘-→	Expand the details displayed under the current selection
⌘-←	Collapse the details displayed under the current selection
Page Up key	Scroll up
Page Down key	Scroll down
Home key	Scroll to the top of the list
End key	Scroll to the bottom of the list

Viewing usage statistics locally (Mac OS)

Use the Usages Statistics dialog box to view usage statistics, such as how FileMaker Server is performing and how many guests are connected to hosted databases.

To display usage statistics, in FileMaker Server choose Window menu > Usage Statistics.

You see the Usage Statistics window.



Value	Current	Average	Peak
Transactions/second	0	0	11
Network (Kbytes/sec)	0	0	1
Disk (Kbytes/sec)	0	0	9
Cache Hit %	100	100	100
Cache Unsav'd %	0	0	0
Files	8	8	8
Guests	3	3	3

For information about the statistics displayed, see “Viewing usage statistics for FileMaker Server remotely” on page 5-3. For information about where usage statistics are stored and charting them, see “Recording usage statistics and setting size limits” on page 4-9.

Hosting FileMaker Pro 5 files locally (Mac OS)

When FileMaker Server starts, it automatically opens or *hosts* all multi-user files in the FileMaker Server folder (and subfolders one level down).

Important

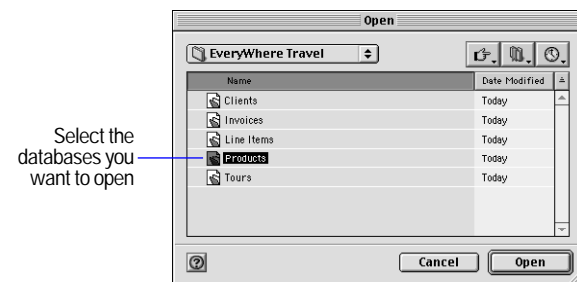
- FileMaker Server 5 supports only FileMaker Pro 5 databases. Therefore, any existing databases you have from a previous version of FileMaker Pro must be converted to FileMaker Pro 5 format before you can host them using FileMaker Server 5.

- Don't use personal file sharing to share FileMaker Pro files.

To host database files using the local administration window:

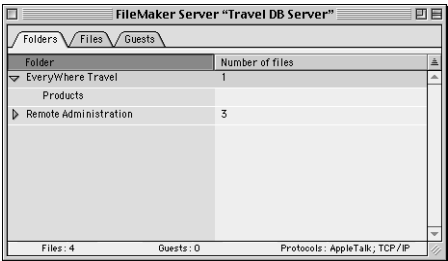
- In FileMaker Server, choose File menu > Open File.

You see the Open dialog box.



- Select one or more database files you want to host, then click Open.

The database files appear in the Folders tab of the administration window.



Tips

- Alternatively, you can drag one or more database files onto the FileMaker Server administration window to open them for guest access.
- FileMaker Server can open files set to Single User in FileMaker Pro, if you have enabled the Allow FileMaker Server to host Single User files option. For more information, see “Allowing single user files to be hosted” on page 4-5.
- You can use the Multi-User (Hidden) command in FileMaker Pro 5 to prevent subordinate related files from appearing in the Hosts dialog box. For more information, see the *FileMaker Pro 5 User’s Guide*.
- You can Shift-click additional files in the Open dialog box to open more than one file at a time.

Closing hosted files locally (Mac OS)

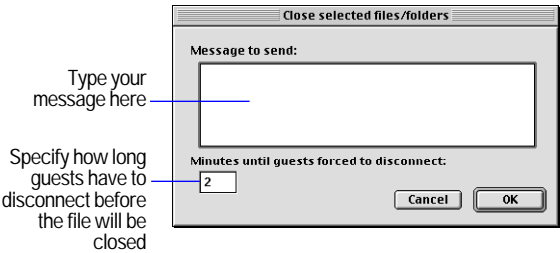
To close a hosted database and disconnect any guests currently accessing it:

1. In FileMaker Server, choose Window menu > Administration Window to display the list of currently hosted files.
2. Select a database file in the list that you want to close.

Tip You can Shift-click additional databases in the list to close more than one at a time. If you are viewing databases by folder, you can select one folder to close all files in it or Shift-click an assortment of files and folders to close them.

3. Choose File menu > Close File.

You see the Close selected files/folders dialog box.



4. Enter text for the options in the dialog box, or accept the default message and settings.

For this option	Do this
Message to send	Type text you want the guests to see in addition to the standard FileMaker Pro message (asking guests to close the database file).
Minutes until guests forced to disconnect	Enter a value (the default is 5 minutes or the last-entered value).

5. Click OK.

The file or folder name in the list changes to italicized text to show that FileMaker Server is closing it.

Guests see a notification dialog box with your message requesting they close their connection to a file. If guests don’t close the file, the message repeats approximately one minute before the file is set to be closed by FileMaker Server.

When the set time elapses, FileMaker Server disconnects any remaining guests and closes the file or files in the folder. The file or folder name no longer appears in the local administration window.

Completing the process of closing a folder, a large database file, or a file with many connected guests may take several minutes.

Disconnecting guests locally (Mac OS)

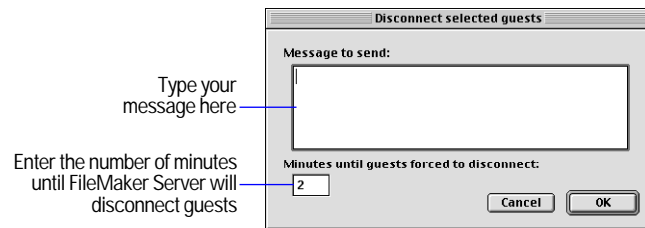
To disconnect a guest of a hosted database:

1. In FileMaker Server, choose Window menu > Administration Window.
2. Click the Guests tab to display a list of guests who are currently connected to hosted databases.
3. Select a guest that you want to disconnect from hosted databases.

Tip You can Shift-click additional guests in the list to disconnect more than one at a time.

4. Choose File menu > Disconnect Guest.

You see the Disconnect selected guests dialog box.



5. Enter text for the options in the dialog box, or accept the default settings. For more information about disconnection options, see “Disconnecting guests remotely” on page 5-6.

6. Click OK.

The guest name in the list changes to italics to show that FileMaker Server is attempting to disconnect the guest.

7. The selected guest sees a notification dialog box with your message requesting that the guest disconnect from the server. If the guest doesn’t disconnect, the message repeats approximately one minute before the guest is set to be disconnected.

8. When the set time elapses, FileMaker Server disconnects the guest and the guest’s name disappears from the Guests tab in the administration window.

Sending messages to guests locally (Mac OS)

To send a message at any time to one or more guests:

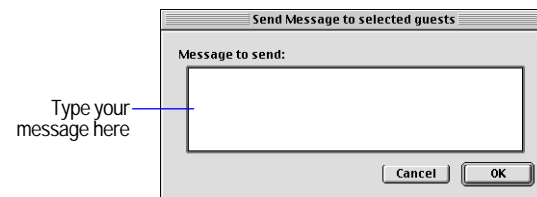
1. In the FileMaker Server, choose Window menu > Administration Window.
2. In the Administration window, make a selection.

Select	To send a message to
A database file	All guests of the database
A folder	Guests of the databases in the folder
A guest	One guest
Nothing	All guests

Tip You can Shift-click additional guests to send your message to a group of specific guests.

3. Choose File menu > Send Message.

You see the Send Message to selected guests dialog box.



4. In the Message to send box, type your message, then click OK.
FileMaker Server sends the message to the selected recipient(s).

Windows: You can also send a message to guests while working on the server computer by scheduling a Send Message task. For more information, see chapter 6, “Scheduling administrative tasks with FileMaker Server.”

Using reported events to track activities

FileMaker Server uses the Windows Event Viewer (Windows) or creates a Server Event Log file (Mac OS) to help you keep track of activities on the server. These log files contain time-stamped information on:

- FileMaker Server starting and stopping, as well as the size of the database cache
- database files opened and closed by FileMaker Server
- guests that connect to and disconnect from FileMaker Server, as well as the files they access
- guests that are disconnected by FileMaker Server
- new, completed, upcoming, and currently running schedules
- pre-defined errors and other unusual conditions that occur when FileMaker Server is running
- properties (Windows) or preferences (Mac OS) settings that are changed during a FileMaker Server session

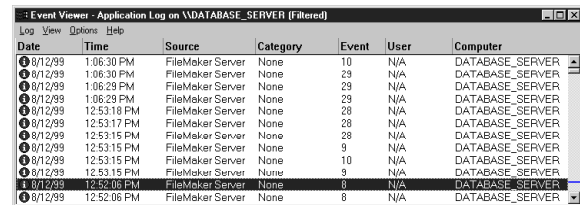
Tip If you want to log four-digit dates in the Event Viewer (for example, 2000 rather than 00), adjust the system date setting on your server computer.

Viewing activities in the Event Viewer (Windows NT)

To view information about FileMaker Server activities:

1. Click the Start button > Programs > Administrative Tools (Common) > Event Viewer.
2. Choose Log menu > Application.

You see a list of FileMaker Server Events in the Event Viewer.

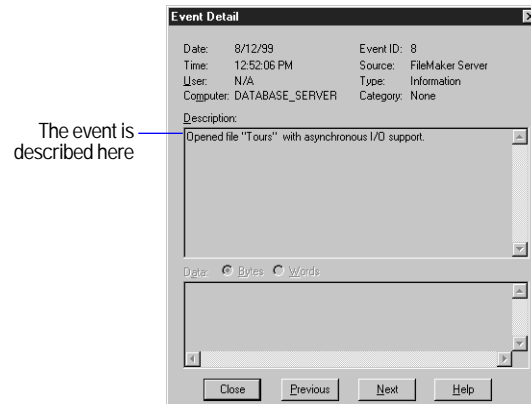


Date	Time	Source	Category	Event	User	Computer
8/12/99	1:06:30 PM	FileMaker Server	None	10	N/A	DATABASE_SERVER
8/12/99	1:06:30 PM	FileMaker Server	None	29	N/A	DATABASE_SERVER
8/12/99	1:06:29 PM	FileMaker Server	None	29	N/A	DATABASE_SERVER
8/12/99	1:06:29 PM	FileMaker Server	None	29	N/A	DATABASE_SERVER
8/12/99	12:53:18 PM	FileMaker Server	None	28	N/A	DATABASE_SERVER
8/12/99	12:53:17 PM	FileMaker Server	None	28	N/A	DATABASE_SERVER
8/12/99	12:53:15 PM	FileMaker Server	None	28	N/A	DATABASE_SERVER
8/12/99	12:53:15 PM	FileMaker Server	None	9	N/A	DATABASE_SERVER
8/12/99	12:53:15 PM	FileMaker Server	None	10	N/A	DATABASE_SERVER
8/12/99	12:53:15 PM	FileMaker Server	None	9	N/A	DATABASE_SERVER
8/12/99	12:52:06 PM	FileMaker Server	None	8	N/A	DATABASE_SERVER
8/12/99	12:52:06 PM	FileMaker Server	None	8	N/A	DATABASE_SERVER

Double-click an event

Windows NT Event Viewer dialog box

3. Double-click an event to display details about it.



For more information about the error conditions reported in the Event Log, see appendix C, “Event log messages and troubleshooting.”

Tip Choose Log menu > Save As to save information displayed in the Event Viewer as a tab-delimited text file (.TXT) and then import the information into a FileMaker Pro database for further analysis.

Viewing activities in the Event Viewer (Windows 2000)

To view information about FileMaker Server activities:

1. Click the Start button > Settings > Control Panel.
2. Open the Administrative Tools folder.
3. Double-click the Event Viewer icon.
4. Click Application Log in the Console Tree.
5. Choose View menu > Filter.
6. For Source, choose FileMaker Server.
7. Click OK.

You see a list of FileMaker Server Events in the Details Pane of the Event Viewer console.

8. Double-click an event to display details about it.

Tip Choose Action menu > Export List to save information displayed in the Event Viewer as a tab-delimited text file (.TXT) and then import the information into a FileMaker Pro database for further analysis.

For more information about the error conditions reported in the Event Log, see appendix C, “Event log messages and troubleshooting.”

Keeping event data current (Windows)

You might want to configure the Event Viewer to overwrite event information, because the default setting is to stop recording events when the application log becomes full. If you have many databases open with many users accessing them, and if you flush the cache often, the log could fill up quickly and the information in the Event Viewer could quickly become out of date.

To overwrite event information when the log is full:

1. Choose one of the following:

- Windows NT: In the Event Viewer, choose Log menu > Log Settings.
- Windows 2000: In the Event Viewer, choose Action menu > Properties.

2. For Event Log Wrapping, select Overwrite Events as Needed.

3. Click OK.

Tip You might want to increase the Maximum Log Size setting from the default 512 KB to 4096 KB or more, depending on how much FileMaker Server activity you anticipate on your server computer.

Viewing activities in the Server Event Log (Mac OS)

The Server Event Log file is created in the FileMaker Server 5 folder. You can use any application capable of opening plain text files to view or print it. You can have the log file open when FileMaker Server is running, but you won’t see recent updates in the file until you close the log file and reopen it. For more information about the error conditions reported in the Server Event Log, see appendix C, “Event log messages and troubleshooting.”

A new log file is created each time you start FileMaker Server. The log from the previous session is backed up in the FileMaker Server 5 folder and renamed Server Last Event Log. Therefore, you always have the current log file and the previous one available for review. To save a specific log file, use the Finder to rename it before it is overwritten by FileMaker Server.

You can set a maximum size for the Event Log to prevent it from taking up too much space on your disk. For more information, see “Setting a size limit for the Server Event Log (Mac OS)” on page 4-11.

Recalculating the Today function in hosted databases

The Today function in FileMaker Pro updates whenever a database file is opened. If a database file you're hosting with FileMaker Server contains fields that use the Today function, you must close that file and reopen it each day for this function to recalculate correctly. See the *FileMaker Pro 5 User's Guide* for information on the Today function.

Tip You can avoid using the Today function by creating a calculation field that uses the Status(CurrentDate) function in FileMaker Pro.

If you have the Server Administration plug-in installed on a client computer, you can use the FileMaker Server remote administration capability to recalculate the Today function as described below.

Mac OS: You can alternatively open and close the database using the local administration capability as described on page 5-11.

To recalculate the Today function:

1. Log on to a Windows client computer or a computer running the Mac OS located on the same network as your FileMaker Server computer.
2. Click the Start button > Programs > FileMaker Pro 5 (Windows) or double-click the FileMaker Pro 5 application icon (Mac OS).
3. Click Hosts and select the name of your FileMaker Server computer.
4. In the Remote Administration window, select the database containing the Today function in the Files or Folders tab, then click Close File.
5. Click Open File, select the file that you just closed, then click OK.

Closing and reopening the database in FileMaker Server causes the Today function to be recalculated by the next FileMaker Pro guest who opens the hosted file.

6. Choose File menu > Close to close the Remote Administration window.

7. In FileMaker Pro, choose File menu > Open.

8. In the Open dialog box, click Hosts.

9. Double-click the file containing the Today function to access it as a guest.

A message appears stating that the Today function is being calculated. This process may take some time depending on the number of records and other database calculations in the file.

Tips

- You can automate the process of opening and closing files by setting up a schedule in FileMaker Server to run a .CMD script (Windows) or an AppleScript (Mac OS). For more information about running scripts on a schedule, see chapter 6, "Scheduling administrative tasks with FileMaker Server."
- Windows: You can use the Schedule service provided with Windows to perform these steps each day. See the sample files in the RCToday folder in the Examples folder, inside the FileMaker Server 5 folder, and the Windows documentation for more information about the Schedule service.
- Mac OS: You can automate how you recalculate the Today function in hosted databases using the sample AppleScript named Recalculate Today Function located in the AppleScript Examples folder inside the FileMaker Server 5 folder.

Chapter 6

Scheduling administrative tasks with FileMaker Server

You can create schedules to perform these tasks:

- back up hosted databases
- run command files (Windows)
- run AppleScript scripts (Mac OS)
- send messages to guests

You can define up to 50 schedules in FileMaker Server. If you set up schedules that overlap, FileMaker Server starts the first task and holds the next task in queue. When the first task has completed, the next task will begin.

Windows: In addition to defining scheduled tasks in FileMaker Server, you can also automate administrative tasks by using the command line interface. You can use utilities that come with Windows, such as Windows Backup and Schedule services, for running automated tasks similar to those provided by FileMaker Server.

Scheduling tasks to run automatically (Windows)

You can use the Task Scheduling assistant to define three unique kinds of tasks and set the times that they execute. You can:

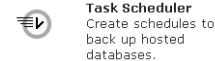
- schedule database backups
- run command files
- send messages to guests of hosted databases

To create a scheduled task:

1. Click the Start button > Programs > FileMaker Server 5 > FileMaker Server Console.

You see the FileMaker Server console. FileMaker Server is selected in the Console Tree and the Details Pane displays the configuration assistants.

2. Click Task Scheduler in the Details Pane of the FileMaker Server console.



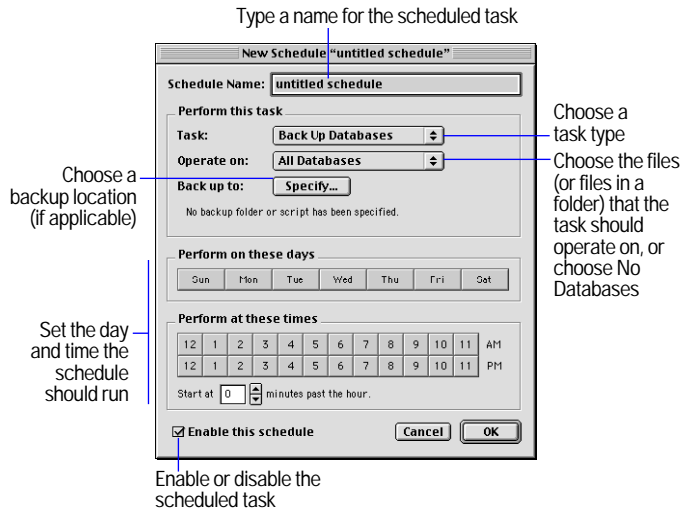
You see the Task Scheduling assistant.

3. Follow the directions provided by the assistant to define a task and set up a schedule for when it will run.

Scheduling tasks to run automatically (Mac OS)

1. Choose Schedules menu > New Schedule.

You see the New Schedule dialog box.



2. In the New Schedule dialog box, type a name for the task in the Schedule Name text box.
3. Choose the type of task (Back up database, Run script, or Send message) from the pop-up menu. See the sections following step 6 for more information.
4. Click the day(s) you want the task to be performed.
5. Click the hour(s) and the up arrow for Start at *n* minutes past the hour to set the time you want the task to be performed.

To deselect a day or hour, click it again.

Note A new scheduled task is enabled by default, which means the task will run at its scheduled time after you close the New Schedule dialog box. For information about enabling and disabling scheduled tasks, see page 6-5.

6. Click OK.

Scheduling database backups

- For Operate on, choose All Databases to back up all hosted databases that are currently open, or choose a specific folder name from the pop-up menu to back up hosted databases in that folder.
- For Back up to, click Specify and locate a folder that you want FileMaker Server to store your backups in, or create a new folder.

Tips

- Be sure to specify a folder that is not in the same folder as the FileMaker Server application (or a subfolder one level down). Otherwise, your backups could accidentally be opened after a server restart when FileMaker Server automatically opens all databases on startup.
- It's important that you not run out of disk space on the backup destination disk. For more information, see page 6-8.

Running an AppleScript

- For Operate on, choose All Databases to have the script affect all hosted databases that are currently open, choose a specific folder name from the pop-up menu to run the script on all databases in that folder, or choose No Databases if you want to run a non-database related script.

Note For an example using the No Databases option, see the example AppleScript named Run a Schedule in the AppleScript Examples folder inside the FileMaker Server 5 folder.

- For Specify Script, click Specify and locate an AppleScript on your system that you want to run.

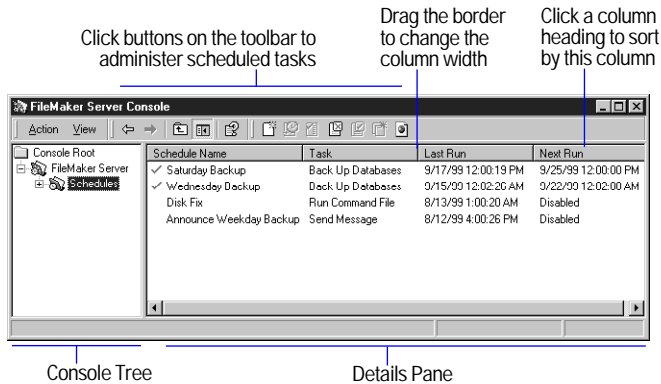
Sending messages to guests of hosted databases

- For Operate on, choose All Databases to send a message to all users who are currently connected to hosted databases, or choose a specific folder name from the pop-up menu to send a message to guests of open databases in that folder.
- Type your message in the text box.

Viewing scheduled tasks in the Schedules list (Windows)

After you create scheduled tasks, they appear in the Schedules list. The list shows you a summary of each defined schedule, including the last time the task ran and the next time it will run.

To display the Schedules list, select Schedules in the Console Tree.



You can use this view of your scheduled tasks to change, duplicate, enable, disable, and run tasks manually.

Tip To change the way items are displayed in the scheduled task list, choose View menu and then choose a display option.

Administering scheduled tasks with the toolbar (Windows)

Use the toolbar to work with scheduled tasks in the list. First, select one or more schedules in the list, then click an active tool on the toolbar.

Note The tools available on the toolbar change depending on your selection in the FileMaker Server window. Therefore, not all tools described below will always be visible.

Use this tool

To perform this action



Display the information that was previously displayed in the Details Pane of the FileMaker Server console. Information is displayed in reverse historical order.



Display the information that was previously displayed in the Details Pane of the FileMaker Server console. This button activates after you have used the Back button (above) to display a previous page in the Details Pane and lets you go “forward” in historical order.



Move the selection up one level in the folder hierarchy in the Console Tree.



Hide the Console Tree.



Delete the current selection.



Display properties for the current selection.



Update information displayed in the Details Pane of the FileMaker Server console (such as the last time a schedule ran).



Display procedural FileMaker Server Help.



Open the New Schedule assistant to create a new schedule to add to the list.



Run the selected scheduled tasks right now, regardless of the execution time defined by the schedule.



Enable or disable the selected scheduled tasks. If the selected tasks are enabled to run on their defined schedule, clicking this button disables them, removing the checkmark from their list entry. If the selected tasks are disabled and are prevented from running on their defined schedule, clicking this button enables them, placing a checkmark on the left of their list entry.

Use this tool**To perform this action**

Prevent all scheduled tasks from running, even if they are enabled (checked) in the Schedules list. This option lets you turn off all schedules at once and is convenient for performing administrative tasks on the server computer. When you click this button, checkmarks of enabled tasks are dimmed in the Schedules list.



Allow all scheduled and enabled tasks to run. Tasks that you have individually disabled will not run.



Duplicate one or more selected scheduled tasks to use as a template for creating a new scheduled task.



Display FileMaker on the Web information in the Details Pane of the console, which gives you easy access to the official FileMaker, Inc. web site. Click this tool again to return to the previously displayed page in the Details Pane.

Tip You can place the pointer over a tool to display a description of it.

Updating Last Run and Next Run information (Windows)

Last Run and Next Run information gets updated in the Schedules list every 15 seconds. You can update it more often, if you want.

To update the information about when a scheduled task ran last and when it will run again, select one or more scheduled tasks and choose Action menu > Refresh.

Viewing scheduled tasks in the Schedules window (Mac OS)

After you create a scheduled task, it appears in the Schedules window.

To display the Schedules window, choose Window menu > Schedules Window.

Click a column heading to sort the list by that column. Sort order is indicated by the triangle above the scrollbar

Drag the border to change the column width

Click to reverse the sort order of the list based on the selected column

Click a checkbox to disable or enable an individual scheduled task

Name	Task	Last Run	Next Run
<input checked="" type="checkbox"/> Weekend Backup	Back up	None	9/25/99 1:00 AM
<input checked="" type="checkbox"/> Weekday Backup	Back up	None	9/21/99 12:00 AM
<input checked="" type="checkbox"/> Ticket Pick-up Reminder	Send message	None	9/24/99 8:00 AM
<input checked="" type="checkbox"/> Check Specials Message	Send message	None	9/21/99 5:00 PM

The list shows you a summary of each defined schedule, including the task it performs, the last time it ran, and the next time it will run. For information on working with lists see “Sorting and resizing columns (Mac OS)” and “Selecting information and scrolling in lists (Mac OS)” on page 5-10.

You can use this view of your scheduled tasks to change, duplicate, enable, disable, and run them manually as described in the following sections.

Running scheduled tasks manually

1. In the Schedules list (Windows) or Schedules window (Mac OS), select a scheduled task that you want to run.
2. Choose Action menu > Run Now (Windows) or Schedules menu > Run Schedule (Mac OS).

The Last Run column is updated with the current date and time.

Changing scheduled tasks

1. In the Schedules list (Windows) or Schedules window (Mac OS), select a scheduled task.

2. Choose Action menu > Properties (Windows) or Schedules menu > Edit Schedule (Mac OS).

See page 6-2 for an illustration of the options in the Edit Schedule dialog box.

3. Make changes to the scheduled task, then click OK.

Tips

- You can double-click a schedule in the list to open the schedule Properties (Windows) or Edit Schedule dialog box (Mac OS).
- To change the format of dates or times in the Schedules list, change the date or time format settings in the Regional Settings control panel (Windows) or the Date & Time control panel (Mac OS).

Duplicating scheduled tasks

Sometimes it’s easier to use an existing scheduled task as a template, rather than defining a completely new schedule. To duplicate an existing schedule and use it as a base for a new one:

1. In the Schedules list (Windows) or Schedules window (Mac OS), select one or more scheduled tasks.
2. Choose Action menu > Duplicate (Windows) or Schedules menu > Duplicate Schedule (Mac OS).

The schedule appears with the word “copy” appended to its name. For more information about editing the duplicate schedule, see the previous section and “Scheduling tasks to run automatically (Mac OS)” on page 6-1.

Deleting scheduled tasks

1. In the Schedules list (Windows) or Schedules window (Mac OS), select one or more scheduled tasks.
2. Choose Action menu > Delete (Windows) or Schedules menu > Delete Schedule (Mac OS).

You see a confirmation message asking you to confirm that you want to delete the selected schedule.

Note You can’t undo the deletion of a schedule.

3. Click OK.

Enabling and disabling scheduled tasks

You can enable or disable specific schedules or disable all schedules at once.

To perform this action	Do this
Enable a schedule when creating it	<p>In the scheduled task’s Properties dialog box (Windows) or New Schedule dialog box (Mac OS), be sure Enable this schedule is selected.</p> <p>Windows: If you use the Task Scheduling assistant to create a schedule, the scheduled task is enabled by default.</p>
Enable a schedule that was disabled	<p>Windows: Select one or more disabled schedules in the Schedules list and choose Action menu > Enabled. A checkmark appears next to the Enabled command in the Action menu to indicate the current selection is enabled.</p> <p>Mac OS: In the Schedules window, click the empty checkbox to the left of the schedule name. A checkmark appears, indicating that the scheduled task is enabled.</p>
Disable a selected schedule	<p>Windows: Select one or more enabled schedules in the Schedules list and choose Action menu > Enabled. The checkmark next to the Enabled command in the Action menu disappears to indicate the current selection is disabled.</p> <p>Mac OS: In the Schedules window, click the checkbox to the left of the schedule name. The checkmark disappears, indicating that the scheduled task is disabled.</p>

To perform this action	Do this
Prevent all schedules from running	Windows: Choose Action menu > Allow schedules to run. Mac OS: Choose Schedules menu > Allow Schedules to Run. The checkmark on this command disappears, indicating that this option is turned off. This setting overrides any individual schedule settings you have enabled and all checkmarks in the list are dimmed indicating that all schedules are disabled. If you open the Properties (Windows) or Edit Schedule dialog box (Mac OS) for a disabled scheduled task, however, the checkmark in the Enable this schedule option might still be checked.
Allow enabled schedules to run	Windows: Choose Action menu > Allow schedules to run. Mac OS: Choose Schedules menu > Allow Schedules to Run. A checkmark appears on this command, indicating that all scheduled tasks that are individually checked in the scheduled task list are enabled. Scheduled tasks that were individually disabled are not re-enabled until you enable them individually.

Windows: You can also use tools on the toolbar in the Schedules list to enable and disable scheduled tasks. For more information, see “Viewing scheduled tasks in the Schedules list (Windows)” on page 6-3.

Using the command line to automate tasks (Windows)

You can use the command line interface to automate tasks with FileMaker Server, such as backing up files using the Windows Backup and Schedule services, or administering files from the FileMaker Server computer.

You can use the command line to:

- start or stop FileMaker Server
- host FileMaker Pro files
- close files hosted by FileMaker Server
- pause or resume a file or files to periodically flush the cache

Below is a list of commands available with FileMaker Server. Text enclosed in the [] characters indicates that the item is optional. *[path]* indicates one or more filenames (possibly including wildcard characters) or folder names are optional parameters to the command. *#minutes* indicates you need to type a numeric value for the number of minutes before guests are disconnected after a stop or close command.

Command syntax	Description
fmserver start [-s]	Start the FileMaker Server service. Include the -s option to skip automatically opening files in the FileMaker Server 5 folder (and subfolders one level down).
fmserver stop [-m “message text”] [-t #minutes]	Stop the FileMaker Server service, send a custom message to guests, and set the number of minutes before the files close.
fmserver open [path]	Host specific FileMaker Pro files.
fmserver close [path] [-m “message text”] [-t #minutes]	Close specific FileMaker Pro files, send a custom message to guests, and set the number of minutes before the files close.
fmserver pause [path]	Pause activity on specific or all FileMaker Pro files. Pause files before copying them to another folder, for example, when backing them up. Useful with the NT Backup and Schedule services. If you don’t specify a path, all hosted files are paused. Pause causes all changes for a particular file to be written from cache to disk and prevents guests from making any changes to the file until the file is “resumed.” After a file is successfully paused, it’s safe to copy it using a script or back-up program.

Command syntax	Description
<code>fmserver resume [path]</code>	Resume activity on specific or all paused FileMaker Pro files after they have been copied or backed up. Useful with the NT Backup and Schedule services. If no path is specified, all paused files are resumed.

To access the command line interface:

1. Open an MS-DOS window using the Command Prompt icon (Windows NT) or click the Start button > Programs > Accessories > Command Prompt (Windows 2000).

2. At the command prompt, switch to the FileMaker Server 5 folder. If you installed FileMaker Server in the default location, type:

```
cd c:\Program Files\FileMaker\FileMaker Server 5
```

3. Type `fmserver` followed by a FileMaker Server command and any optional parameters and switches.

The following table contains examples of FileMaker Server commands you can use.

Use this command	To
<code>fmserver start</code>	Start the FileMaker Server service and open all multi-user FileMaker Pro files in the FileMaker Server 5 folder (and subfolders one level down).
<code>fmserver start -s</code>	Start the FileMaker Server service without opening any FileMaker Pro files.
<code>fmserver stop -m "All servers will be shut down in 10 minutes" -t 10</code>	Send a custom message to guests and stop the FileMaker Server service in 10 minutes. This sequence closes all hosted database files.
<code>fmserver open</code>	Open all multi-user FileMaker Pro 5 files in the FileMaker Server 5 folder (and subfolders one level down).
<code>fmserver open expenses.fp5 messages.fp5</code>	Open the Expenses and Messages files.

Use this command	To
<code>fmserver open "names and addresses.fp5"</code>	Open the Names and Addresses file. Note The filename in this example includes spaces and therefore must be enclosed in quotes.
<code>fmserver close</code>	Close all hosted FileMaker Pro files in the default close time (five minutes).
<code>fmserver close expenses.fp5 -m "I'll be closing the Expenses file in 10 minutes" -t 10</code>	Send a message to guests of the Expenses file and close it in 10 minutes.
<code>fmserver pause</code>	Pause all currently hosted FileMaker Pro files, which restricts guest activity to all hosted files.
<code>fmserver pause expenses.fp5</code>	Pause the Expenses file, which restricts guest activity to that file.
<code>fmserver resume</code>	Resume all paused files.
<code>fmserver resume expenses.fp5</code>	Resume the paused Expenses file.

For more examples, see the FileMaker Server sample files (installed in the Examples folder in the FileMaker Server 5 folder) or use the `fmserver /?` command at the command prompt to view a list of available commands. For general information about using the command prompt, see your Windows documentation.

Example: Backing up hosted databases on the command line (Windows)

You can use the `fmserver pause` and `fmserver resume` commands in the MS-DOS window, along with DOS commands, to back up FileMaker Pro database files to another folder. To automate this process, you can enter the commands described in a text file, and then execute the commands using a Windows batch process.

The process of backing up hosted databases using the command line is to create a directory in which to temporarily store the backups, pause hosted databases to limit access to them on your network, copy the files to the new directory, restore availability of the files to guests, and remove the temporary backup directory you created. These steps are described in detail below.

1. Use the DOS `mkdir` command to create a new directory, for example, Backups.
 2. Use the `fmserver pause` command, which pauses a specified file or files hosted by FileMaker Server.
- Guest activity on paused database files is restricted, so it's best to limit overall pause time as much as possible.
3. Use the DOS `xcopy` command to copy all files (including files in subdirectories) from the FileMaker Server 5 directory to the Backups directory.
 4. Use the `fmserver resume` command to restore guest access to paused database files.
 5. Move the files from the Backups directory to a permanent backup location and use the `rmdir/s/q` command to delete the Backups directory and subdirectories.

Tips

- A sample command file named Backup.cmd containing this sequence of commands is in the Examples folder inside the FileMaker Server 5 folder. You can use this file as a template for backing up your own hosted databases.
- To execute this set of commands on an automatic schedule, you need to use the `at` command and Schedule service provided by Windows. For more information, see your Windows documentation. If you have a tape drive, you can use the `backup` command provided by Windows to copy files directly to tape.

Using an AppleScript to automate tasks (Mac OS)

You can use an AppleScript to automate administrative tasks performed by FileMaker Server. For more information about AppleScript application programs that are provided with FileMaker Server and about supported Apple events, see the AppleScript Examples folder inside the FileMaker Server 5 folder.

Making sure you don't run out of disk space

It's important that the destination disk where you plan to store your hosted files and backups has plenty of free space. If the hard disk runs out of space while a file is being modified or if a database file reaches the 2GB size limit, FileMaker Server will automatically begin compressing the hosted file to reduce the amount of disk space it uses. During the compression, all guest activity to the server is paused and guests see the coffee cup icon ☕ or the network icon. Compression may take some time to complete. To avoid automatic compression, leave plenty of free disk space on the computer running FileMaker Server.

If the hard disk runs out of space during a backup, the backup stops and FileMaker Server logs an error in the application event log (Windows) or Server Event Log (Mac OS). It's a good idea to periodically check the Schedules list for error conditions, which are reported in the Last Run column. To avoid running out of disk space when backing up files, choose tape or a different hard disk as your backup destination.

For additional help troubleshooting command line problems, see appendix C, "Event log messages and troubleshooting."

Appendix A

Technical specifications and optimization

Limits for files and usage

Item	Limitation
Number of files hosted by FileMaker Server	Maximum of 125 files depending on the Maximum number of files to host setting (other network applications may limit this number).
Number of files open at the same time	Maximum of 50 per FileMaker Pro 5 guests.
Number of network users	Maximum number of guests is 250. (AppleTalk support is limited to 124 simultaneous guests.) You can restrict the number of simultaneously connected guests with the Allow up to <i>n</i> simultaneously connected guests setting. Specifying a realistic number of guests fewer than 250 can optimize performance.
File size	Maximum of 2 GB (gigabytes) per file. The combined size of all open files is limited only by disk space.
Length of host name	Maximum of 31 characters.
Length of FileMaker Server password	Maximum of 31 characters.
Length of filename	Windows: Maximum of 255 characters. Note To open the files in FileMaker Server, the first 31 characters of the filename must be unique. Mac OS: Maximum of 31 characters.

Hardware and network considerations

Keep the following points in mind when you're setting up FileMaker Server on your computer and configuring the network where it will run.

Use a dedicated computer

Use FileMaker Server by itself on a computer on which no other applications are normally running and that isn't a user's primary workstation. When FileMaker Server is hosting many guests or a large number of database files, it uses a high level of processor, disk, and network capacity. Other processor-intensive applications or heavy network traffic on the same computer causes FileMaker Server to run more slowly, and the performance of FileMaker Pro on guest computers to degrade.

Use as fast a computer as possible

The faster the computer, the better the performance of FileMaker Server.

- Windows: FileMaker Server requires at minimum a Pentium processor.
- Mac OS: FileMaker Server requires at minimum a PowerPC processor. FileMaker Server is optimized for the PowerPC G3 processor in a Power Macintosh G3 computer.

Use a fast hard disk

Because of the way FileMaker Pro stores information in files, FileMaker Server benefits a great deal from fast disk input/output. Try to use a hard disk with software (or drivers) that supports asynchronous disk I/O. This technology lets FileMaker Server perform other operations after starting a read or write operation on a file, rather than having to wait for the disk I/O to complete. If FileMaker Server can take advantage of asynchronous I/O when opening a file, it notes it in the corresponding log file entry. (See “Viewing activities in the Server Event Log (Mac OS)” on page 5-15 for more information.) To determine whether your hardware supports asynchronous I/O, refer to the documentation that came with your hardware.

Use a fast network

Mac OS: If possible, use a network faster than LocalTalk, such as Ethernet.

Software considerations

Consider the following issues when deciding which software to use with FileMaker Server.

Only FileMaker Pro 5 databases can be hosted

FileMaker Server 5 supports only FileMaker Pro 5 databases. Therefore, any existing databases you have from a previous version of FileMaker Pro must be converted to FileMaker Pro 5 format before you can host them using FileMaker Server 5.

Coexistence with screen saver software

Avoid using screen saver software that creates moving images on the monitor of the computer running FileMaker Server. This type of software can use significant system resources, which hinders the processing of FileMaker Server networking traffic. Instead, use a screen saver that blacks out your monitor or dims its brightness, or manually dim the monitor.

Turn off file sharing

Make sure operating system file sharing is turned off on the server computer.

Coexistence with AppleShare software (Mac OS)

Running AppleShare software (including AppleShare and AppleShare Pro) and the FileMaker Server application on the same computer is *not* recommended. If you must use that configuration, keep the following information in mind:

- Limit connected AppleShare users.

Users connected to an AppleShare server through the AppleTalk protocol occupy a physical connection to the server known as an AppleTalk socket. AppleTalk sockets are also used by FileMaker Server when guests access a hosted file using the AppleTalk protocol. If many users are connected to the AppleShare server and are occupying these AppleTalk sockets, fewer sockets are available to FileMaker Server running on the same computer. This could cause FileMaker Pro guests using the AppleTalk protocol to receive a message indicating that they have exceeded host capacity, which prevents them from accessing hosted databases on the server even if server limit requirements on page A-1 haven't been reached.

- Use a third-party server access monitoring utility to keep the number of AppleShare connections to a minimum and to allow only active connections.

This lets FileMaker Server use the maximum number of sockets for guests of FileMaker Pro files. For more information about configuring AppleShare software, see your AppleShare documentation.

Don't allow the server to sleep

Windows 2000 supports Power Conservation Mode, which can cause your computer to hibernate or enter Standby mode, affecting the operation of FileMaker Server. Similarly, computers running the Mac OS can suspend operations when they enter an energy-saving system sleep state. Therefore, FileMaker, Inc. recommends that you disable Power Conservation mode (Windows 2000) or system sleep (Mac OS) on the computer running FileMaker Server. For more information, see “How FileMaker Server behaves during system sleep” on page 4-11.

Appendix B

Performance and usage tips

Performance tips

If you find that FileMaker Server is sluggish when performing certain operations, try the following:

- Run FileMaker Server on a dedicated computer.
- Use as fast a computer and network as possible.
- Always use remote administration to perform administrative tasks on hosted files, such as sending messages to connected guests.
- Reduce the number of guests able to access FileMaker Server. (See “Setting the number of guests” on page 4-3.)
- Reduce the maximum number of files that can be hosted by FileMaker Server. (See “Setting the maximum number of files” on page 4-4.)
- Monitor the cache hit percentage in usage statistics. You can view real-time usage statistics using the Performance Monitor (Windows NT), Performance console (Windows 2000), or the Usage Statistics window (Mac OS or remote administration).

The value for Cache Hits is the percentage of times FileMaker Pro retrieves data from the cache (RAM) rather than the hard disk. Reading data from RAM is much more efficient than reading it from the hard disk, so this value should be a high number, like 90 or 95. If it isn't, you might need to allocate more memory to FileMaker Server.

FileMaker Server tracks three values for Cache Hits: Current, Average, and Peak. It's best to monitor the Current value periodically, as an average value can be skewed by running even one data-intensive report on a hosted database.

- Monitor the percentage of unsaved cache in usage statistics. This value indicates how much data could potentially be lost if your server computer shut down unexpectedly before writing data stored in cache to the hard disk.

The percentage reported is the portion unsaved in the total cache. For example, if the cache is set to 2 MB and the Cache Unsaved % value is 50, you would lose 1 MB of data should your computer fail unexpectedly.

If the Cache Unsaved % value is consistently high, increase the frequency with which the cache is flushed, or schedule backups that occur more often. For more information about changing cache flush frequency, see “Setting how often the cache is flushed” on page 4-5.

- Don't collect statistical information too frequently. FileMaker, Inc. recommends setting the collection rate no lower than 15 seconds. For more information, see “Recording usage statistics and setting size limits” on page 4-9.

- Perform calculation-intensive operations on a small found set. Sorting, replacing data, viewing and printing summary report layouts, and other calculation-intensive operations performed on many database records affect the overall performance of FileMaker Server for connected guests. Try to perform these types of operations on a smaller found set of only the records you're interested in. (See the *FileMaker Pro 5 User's Guide* for more information about using found sets.) In addition, it's best to schedule these types of operations to be performed during low usage periods.

- Avoid automatic file compression. If the hard disk runs out of space while a file is being modified or if a database file reaches the 2 GB size limit, FileMaker Server will automatically begin compressing the hosted file to reduce the amount of disk space it uses. During the compression, all guest activity to that file is paused. To avoid automatic compression, leave plenty of free hard disk space on the computer running FileMaker Server and monitor database file sizes.
- Enable FileMaker Server to open files automatically. Put database files you want FileMaker Server to host in the same folder as FileMaker Server (and subfolders one level down) to take advantage of the application's ability to open these files automatically on startup and when remote administration is enabled.
- Avoid using FileMaker Server on the same computer that is operating as a file server as performance will be significantly decreased for both services.
- Increase the cache size in the Properties (Windows) or Preferences (Mac OS) dialog box. See “Changing the amount of memory used by FileMaker Server” on page 4-4 for details.
- Verify that no other processor-intensive programs or applications that create a high level of network traffic are being used on the computer running FileMaker Server. Examples of software that can cause performance problems for FileMaker Server include screen savers, Internet Information Server (Windows), or SQL Server (Windows).

Windows: Consider using either the Logon screen saver or the Blank Screen screen saver that is available with Windows.

- Don't use personal file sharing to share FileMaker Pro files. Guests should access hosted FileMaker Pro files using the Hosts button in the Open dialog box in FileMaker Pro.

Usage tips

- FileMaker Server can host FileMaker Pro 5 files created on either the Windows or Mac OS platform, but the files should reside in the FileMaker Server 5 folder (and subfolders one level down). With Windows, you can have the files in other folders if you place shortcuts to the FileMaker Pro files (or to folders containing FileMaker Pro files) in the FileMaker Server 5 folder. You can also drag database files on top of the fmserver.exe (Windows) or FileMaker Server (Mac OS) application icon to open them.
- Windows: If you modify the .fp5 extension of a FileMaker Pro file, FileMaker Server can't automatically open the file when started. To open files with modified filename extensions:
 - Register the non-standard file extension using the File Type properties (see page 4-5) and place the file in the FileMaker Server 5 folder (and subfolders one level down) so it opens when the FileMaker Server service starts.
 - Manually drop the file with the non-standard extension on top of the FMServer.exe file.
 - Use the command line to open the file with the non-standard extension. For more information about command line options, see “Using the command line to automate tasks (Windows)” on page 6-6.
- If you have duplicate filenames in the FileMaker Server 5 folder and subfolders one level down, FileMaker Server opens the first copy it finds.
- FileMaker Server administration allows several operations to be performed simultaneously on all of the files in a single subfolder (for example, Pause, Resume, Close, and Open from the command line or Back-up and Send Message from a scheduled task). To take advantage of this feature, place related databases into the same subfolder. When FileMaker Server is started, these files will be hosted as a group.

- Up to a maximum of 125 files can be made accessible to FileMaker Pro 5 guests on the network. Each FileMaker Pro guest can open a maximum of 50 files. Since FileMaker Server can host up to 125 files, it is possible to have multiple files available for access by multiple workgroups.
- Remember that double-clicking a FileMaker Pro file opens that file in FileMaker Pro 5, not FileMaker Server. See “Hosting FileMaker Pro 5 files remotely” on page 5-4 to learn about opening files with FileMaker Server.
- FileMaker Server displays a message if it can’t open the selected database file and writes a description of the problem to the application log (Windows) or the Server Event Log (Mac OS). See “Using reported events to track activities” on page 5-14 for more information.
- If the database file you’re hosting uses the Today function to calculate dates, you must close and reopen it using FileMaker Server each day to update the dates correctly. See “Recalculating the Today function in hosted databases” on page 5-16 for more information.

Appendix C

Event log messages and troubleshooting

FileMaker Server Event Log messages

The following is a list of some of the log file messages you might see and an expanded explanation. Variables, such as the name of the user or file, are in italics.

Message	Explanation
AppleTalk network initialization failed; an unexpected error occurred (<i>error number</i>)	FileMaker Server couldn't initialize AppleTalk due to an unexpected operating system error. See your operating system documentation for an explanation of the specified error. Check the AppleTalk configuration and reconfigure or reinstall, if needed.
AppleTalk network initialization failed; not enough memory	There is insufficient memory to use AppleTalk. See “What you need” on page 3-1 for RAM requirements.
AppleTalk network initialization failed; protocol not installed	FileMaker Server can't initialize AppleTalk, because the AppleTalk protocol is not installed or not configured correctly in the AppleTalk control panel. Check the network installation and setup procedures in the operating system documentation and reinstall, if necessary.
Closing file <i>filename</i> due to a serious error (<i>error number</i>)	The specified file is being closed by FileMaker Server due to an error condition. The file may need to be recovered in the FileMaker Pro 5 application. See the <i>FileMaker Pro 5 User's Guide</i> for information about recovering damaged files.
Could not pause file <i>filename</i> because of an outstanding database lock from guest <i>guestname</i>	FileMaker Server is trying to get exclusive use of the file to pause it for an operation (for example, a backup or cache flush), but can't because a guest is changing the file. You can try the backup later, or close the file to force the guest(s) to disconnect.
File could not be opened: database may be damaged; try opening in FileMaker Pro	The file may be damaged and needs to be opened in FileMaker Pro 5. Start the FileMaker Pro application, open the file, and follow any instructions on your screen. (See appendix B in the <i>FileMaker Pro 5 User's Guide</i> for more information about recovering files.) Then try opening the file with FileMaker Server.
File could not be opened: must be set to Multi-User in FileMaker Pro	FileMaker Server can't open files set to single user by default. However, you can select Allow FileMaker Server to host Single User files in the Files tab of the Properties dialog box (Windows) or the Preferences dialog box (Mac OS) to open the file without changing it using FileMaker Pro. Alternatively, you can open the file in the FileMaker Pro 5 application and choose File menu > Sharing > Multi-User before opening it with FileMaker Server.
File <i>filename</i> full, compression started	When a FileMaker Pro file approaches the 2 GB file size limit or there is no longer enough free space on the hard disk, FileMaker Server attempts to compress it by reclaiming unused space in the file. This process is automatic, and this message is written to the log file when the process begins.

Message	Explanation
File <i>filename</i> compressed, freeing <i>x</i> blocks	The specified file has been successfully compressed, leaving FileMaker Server enough room to continue working with the file safely. (One block equals 1,024 bytes.)
File <i>filename</i> compressed, but still nearly full. Only <i>x</i> block(s) free	The specified file was compressed, but there isn't enough room for FileMaker Server to continue safely working with the file. The administrator should close the file, back it up, and take steps to reduce the size of the file and create more room on the hard disk.
FileMaker Server is now awake. All schedules will be resumed.	This message is sent to the log by FileMaker Server when the server computer wakes up from hibernation (Windows 2000) or system sleep mode (Mac OS). Files that were hosted by FileMaker Server before hibernation or sleep occurred are now available for guest access once again.
FileMaker Server is going to sleep. The entire cache will be flushed. All schedules will be suspended.	If the server computer is configured to sleep during periods of inactivity, before doing so the operating system prompts each open service or application to find out if the service or application can accommodate sleep mode. If any guests are currently connected to a hosted database, FileMaker Server denies the sleep request and the server computer does not sleep. If no guests are connected, FileMaker Server writes any unsaved changes to disk (flushes the cache) and allows the server computer to sleep. During sleep, all scheduled tasks are suspended and do not run again until the next scheduled time when the server computer is awake.
FileMaker Server quitting! (<i>error number</i>)	FileMaker Server detects a severe error during network use, due to a network failure or other causes. Check network installation, settings, and the system error log (Windows).
FileMaker Server quitting! Network initialization failed; an unexpected error occurred	FileMaker Server can't use any network protocol because of an unexpected error. Check network installation, settings, and the system error log (Windows).
FileMaker Server quitting! Network initialization failed; not enough memory	FileMaker Server can't use any network protocol due to insufficient memory. See "What you need" on page 2-1 (Windows) or page 3-1 (Mac OS) for RAM requirements.
FileMaker Server quitting! This disk is full	FileMaker Server detects that the disk volume is full. Free some space on the disk and restart FileMaker Server.
FileMaker Server quitting! Network initialization failed (<i>error number</i>)	FileMaker Server is unable to start because of missing required software or hardware. See "What you need" on page 2-1 (Windows) or page 3-1 (Mac OS) for more information.
Quit forced; User <i>username</i> forced to close connection (<i>error number</i>)	During a shutdown or disconnect operation, the named user didn't close the file within the specified time. The user's connection was forcibly closed by FileMaker Server.
Remote administration has been disabled because the databases could not be opened (<i>error number</i>)	The system's storage area for temporary files might be full or set to read-only. Check the temporary storage area on the server computer and try again.
Schedule <i>schedulename</i> aborted; destination could not be found	The specified destination could not be found. If the destination is a removable medium, make sure it is inserted in its drive. If the destination volume is an external or network drive, connect the drive or network. Try again after the destination is correctly set up.

Message	Explanation
Schedule <i>schedulename</i> aborted; the destination <i>destination</i> is not writable	The specified destination is locked or read-only. If the destination is a removable medium, you might need to remove it, make it writable, and reinsert it.
Schedule <i>schedulename</i> aborted; no open databases to operate on	The schedule specifies a directory in which FileMaker Server currently has no databases open. Therefore, the scheduled task can't proceed. Make sure that the schedule specifies the correct directory to operate on, and that all databases have been opened correctly.
Schedule <i>schedulename</i> was unable to back up file <i>filename</i> ; can't replace item with that name on destination	When FileMaker Server backs up a file, it first checks if a file with the same name already exists on the destination volume and attempts to rename the existing file. In this case, the existing file could not be renamed, and therefore it could not be replaced with the new backup. Move the existing file to another location or give it a name that doesn't conflict with the file being backed up.
Schedule <i>schedulename</i> was unable to back up file <i>filename</i> ; error writing to destination (<i>error number</i>)	An unexpected operating system error occurred when FileMaker Server attempted to copy files to the destination volume. Refer to the system error log or look up the specified error number in your operating system documentation to determine the cause of the problem.
Schedule <i>schedulename</i> was unable to back up file <i>filename</i> ; file on destination is locked	The named file already exists on the destination volume and is locked or read-only. For the backup to succeed, you need to either move the locked/read-only file to a different folder or change the schedule definition to use a different destination. The file could also be open by another application, in which case it must be closed before it can be moved or renamed.
Schedule <i>schedulename</i> was unable to back up file <i>filename</i> ; not enough free space on destination	The destination volume does not have enough free space to hold a copy of the specified file. Check the free space on the destination or choose a different destination for the backup.
TCP/IP network initialization failed; an unexpected error occurred (<i>error number</i>)	FileMaker Server couldn't initialize TCP/IP due to an unexpected operating system error. See the system event log (Windows) or your operating system documentation for an explanation of the specified error. Check the TCP/IP configuration and reconfigure or reinstall, if needed.
TCP/IP network initialization failed; the TCP/IP address is already in use or an address could not be obtained (<i>error number</i>)	The IP address selected for use by FileMaker Server is already in use or isn't correctly configured. Verify the IP address and TCP/IP configuration in the Networks (Windows) or TCP/IP (Mac OS) control panel. If FileMaker Pro 5 is already running on the same computer and is set to use TCP/IP, FileMaker Server is prevented from using the same IP address. You should run FileMaker Server on a dedicated computer.
TCP/IP network initialization failed; not enough memory	There is insufficient memory to use TCP/IP. See "What you need" on page 2-1 (Windows) or page 3-1 (Mac OS) for RAM requirements.
TCP/IP network initialization failed; protocol is not installed (<i>error number</i>)	Windows: FileMaker Server can't initialize TCP/IP, because the TCP/IP protocol is not installed or not configured correctly in the Networks control panel. Check the network installation and setup procedures in the Windows documentation and reinstall, if necessary.
IPX/SPX network initialization failed; an unexpected error occurred (<i>error number</i>)	Windows: FileMaker Server can't initialize IPX/SPX. Check network settings and system error log.

Message	Explanation
IPX/SPX network initialization failed; not enough memory	Windows: There is insufficient memory to use IPX/SPX. See “What you need” on page 2-1 for RAM requirements.
IPX/SPX network initialization failed; protocol is not installed (<i>error number</i>)	Windows: FileMaker Server can't initialize IPX/SPX, because the IPX/SPX protocol is not installed or not configured correctly in the Networks control panel. Check the network installation and setup procedures in the Windows documentation and reinstall, if necessary.
User <i>username</i> no longer responding, connection closed	A connected guest's computer has stopped communicating with FileMaker Server due to a network disruption or a software error.
Using a database cache size of <i>xK</i>	<p>Written at FileMaker Server startup to show how much of the application's memory is usable for the database cache (<i>x</i> is replaced by a number). You can adjust application memory by changing the Reserve <i>n</i> MB of RAM for database cache in the Files tab of the Properties (Windows) or Preferences (Mac OS) dialog box. The new cache size takes effect the next time you start FileMaker Server.</p> <p>Mac OS: You might have to adjust the application memory size for FileMaker Server using the Get Info dialog box in the Finder. For more information, see “Adjusting memory (Mac OS)” on page 3-2.</p>

Troubleshooting

The following table lists some problems you may encounter when using FileMaker Server.

Tip When FileMaker Server behaves unexpectedly, check the log file to diagnose the problem. See “Using reported events to track activities” on page 5-14 and “FileMaker Server Event Log messages” on page C-1 for more information.

Problems installing or starting FileMaker Server

Symptom	Suggested solution or explanation
You're unable to install FileMaker Server.	<p>Check the hardware and software requirements listed in “What you need” on page 2-1 (Windows) or page 3-1 (Mac OS) to ensure your equipment and software are compatible.</p> <p>Windows: Be sure to log in with administrative privileges when checking for compatibility.</p>
You're unable to start FileMaker Server.	Check the hardware and software requirements listed in “What you need” on page 2-1 (Windows) or page 3-1 (Mac OS) to ensure your equipment and software are compatible. Also check the Windows Event Viewer or the Server Event Log (Mac OS) for a description of why FileMaker Server couldn't start. For more information about the Event Viewer, see “Using reported events to track activities” on page 5-14.

Network problems

Symptom	Suggested solution or explanation
A FileMaker Pro guest using IPX can't find FileMaker Server databases on the network.	Windows: Verify that IPX networking software is properly installed. Verify that the host and guest are using the same frame type. Verify that the IPX/SPX network protocol (or both TCP/IP and IPX/SPX) is selected in the Networking tab of the Properties dialog box. Verify that the 250 simultaneous guest limit has not been reached.
A FileMaker Pro guest using TCP/IP can't find FileMaker Server databases on the network.	<p>Verify that TCP/IP networking software is properly installed on the host and guest computers. In the Hosts dialog box, click the Specify Hosts button and enter the host IP address. Use the DOS Ping command to contact the host address and verify the network is working properly. Verify that the 250 simultaneous guest limit has not been reached.</p> <p>Windows: Verify that the TCP/IP network protocol (or both TCP/IP and IPX/SPX) is selected in the Networking tab of the Properties dialog box.</p> <p>Mac OS: Verify that the TCP/IP network protocol (or both TCP/IP and AppleTalk) is selected in the Networking tab of the Preferences dialog box.</p>
A FileMaker Pro guest using AppleTalk can't find FileMaker Server databases on the network.	Verify that the 124 simultaneous guest limit has not been reached. Also remember that AppleTalk is not supported by FileMaker Server for Windows.

Problems on guest computers

Symptom	Suggested solution or explanation
The FileMaker Server name does not appear in the FileMaker Pro Hosts dialog box.	<p>Hold down the Ctrl key (Windows) or Option key (Mac OS) as you click Hosts in the Open dialog box. Sometimes with high network traffic, FileMaker Pro might not find the server on the first attempt. Holding down the Ctrl or Option key forces FileMaker Pro to check the network for a longer period of time.</p> <p>Windows: Verify that the FileMaker Server service is started in the Windows Services control panel.</p> <p>On a TCP/IP network, you may need to specify the host IP address or name. Click Specify Hosts in the TCP/IP Hosts dialog box, then type in the IP address or the name of the computer running FileMaker Server.</p>
Guests using the IPX/SPX protocol can't see FileMaker Server databases.	This is generally caused by using an incorrect frame type on the server or guest machine. To change the frame type on Windows, you must change the configuration of the IPX/SPX compatible protocol in the Network control panel. See your Windows documentation for more details.
Guests receive Communication with the host was interrupted and could not be re-established message on guest computer.	The guest has been disconnected from a database by FileMaker Server because the guest didn't comply with a request from FileMaker Server to close a database. Another reason communication between the host and guest may have been disrupted is due to a hardware failure (lost network connection) or a software connection time-out (no response from guest for a given period of time). The latter could be caused by a screen saver, debugger, or processor-intensive operation.

Problems on guest computers

Symptom	Suggested solution or explanation
Guests receive <i>servername</i> is no longer available or the host capacity has been exceeded message on guest computer.	FileMaker Server has shut down or you reached the maximum allowable connections or guests on FileMaker Server. Verify that FileMaker Server is running or increase the number of guests allowed in the Guests tab of the Properties dialog box (Windows) or the Preferences dialog box (Mac OS). See “Setting the number of guests” on page 4-3.
Guests receive Host capacity exceeded message on guest computer.	You reached the maximum allowable connections or guests on FileMaker Server. Increase the number of guests allowed in the Guests tab of the Properties dialog box (Windows) or the Preferences dialog box (Mac OS). See “Setting the number of guests” on page 4-3.

Problems administering remotely

Symptom	Suggested solution or explanation
You're unable to administer FileMaker Server remotely using FileMaker Pro 5.	Check that remote administration is enabled in the Administration tab of the Properties dialog box (Windows) or Preferences dialog box (Mac OS). See “Enabling remote administration” on page 4-6. If you want full administrative access to FileMaker Server, you must install the Server Administration plug-in on your remote computer. For more information, see “Administering FileMaker Server remotely” on page 5-1.
The Open, Close, Disconnect, and Get Details buttons are dimmed in the Remote Administration window.	The Server Administration plug-in isn't installed on the remote computer. Install the plug-in and try again. For more information, see “Installing the Server Administration plug-in on a remote computer running Windows” on page 2-6 or “Installing the Server Administration plug-in on a remote computer running the Mac OS” on page 3-5.

Problems using command line options (Windows)

Symptom	Suggested solution or explanation
The command you typed didn't work.	When typing at the command prompt, specify the filename extension (.FP5) after the filename. Make sure that you are using the correct short filenames, or enclose long filenames which contain spaces in quotation marks. To see the short filenames, type <code>dir /x</code> at the prompt.
You can't remember command syntax or usage.	Type <code>fmserver /?</code> at the prompt to view a list of available commands. Look at the messages in the Windows Event Viewer for tips.

Appendix D

About the TechInfo database

The TechInfo database is a great resource for technical information about FileMaker, Inc. products. This FileMaker Pro database serves as a front-line resource for the company's support technicians as they field customer inquiries. It collects Q&As, tips, FAQs, bug reports, update notes, press releases, templates, and other material valuable for support professionals. You can access the TechInfo database in the support area of the official FileMaker, Inc. web site (www.filemaker.com).

Searching the TechInfo database

To locate all information about FileMaker Server in the TechInfo database, specify FileMaker Server as the product name and start your search. You can look for more specific articles by adding additional keywords before searching. For example, including the word *network* as a keyword before you search displays a list of all TechInfo articles that contain the words "FileMaker Server" and "network."

Keep the following search tips in mind:

- Use the singular form, for example, *printer* instead of *printers*.
- Try roots of words. For example, *summar* instead of *summaries* or *summary*.
- Use generic terms. For example, *color postscript* instead of *QMS*.

Sample TechInfo article

The following TechInfo article gives you an idea of the kind of information you will find in the TechInfo database.

FileMaker Inc. TechInfo Database
Can't Launch Application due to Network Copy Protection

Attempting to open more than one copy of FileMaker Pro Server, installed from the same installation disk, will result in the following error messages:

For the Macintosh:
"maximum number of licensed users are currently using this copy of FileMaker Pro Server."

For Windows NT:
"The FileMaker Pro Server service returned service specific error 50."

FileMaker Pro Server has network copy protection built into the application and installation disk or CD. As FileMaker Pro Server starts, the network is polled for other open FileMaker Pro Server hosts, which are checked for an internal identification marker. Multiple copies of FileMaker Pro Server must be installed from the disk set that came with the license.

Article Number: 102517
Date Written: 1/13/1995
Date Last Modified: 5/12/1999

Product: Platform:
FileMaker Pro Server 3.xMacintosh
Windows NT

*Did you find the information
in this article useful?*

Yes | No

Information on the web

You can also find more information, tips, and database ideas by visiting FileMaker, Inc. on the web:

Windows: Choose the Start button > Programs > FileMaker Server 5 > FileMaker on the Web or point your browser to www.filemaker.com.

Mac OS: Choose Help menu > FileMaker on the Web or point your browser to www.filemaker.com.

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