For Windows and Mac

FileMaker®
Pro 5 **Unlimited**

FileMaker Web Server Connector
Administrator's Guide

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Chapter 1
Welcome to the FileMaker Pro Web Server Connector

Welcome to the FileMaker® Pro Web Server Connector software package. FileMaker Pro Web Server Connector is designed to help you share information easily and effectively by serving FileMaker Pro databases through six popular web servers: Microsoft Personal Web Server and Internet Information Server, Netscape Enterprise Server, AppleShare IP Server, WebSTAR, and Apache on Mac OS X Server.

This *FileMaker Web Server Connector Administrator's Guide* tells you how to install and configure the Web Server Connector software on each of the six supported web servers.

Note Documentation for the FileMaker Pro 5 Unlimited application is available on the FileMaker Pro 5 Unlimited CD-ROM, included with this package.

Registration and customer support

Please take the time to complete and mail the registration card for your product, or register online at www.filemaker.com/register or by choosing Help menu > FileMaker on the Web in FileMaker Pro.

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 Help menu > FileMaker on the Web from the FileMaker Pro application. 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 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.

Before you begin

Minimum hardware and software requirements for the FileMaker Pro Web Server Connector

To install and use FileMaker Pro Web Server Connector, you need the Web Server Connector CD-ROM in the FileMaker Pro Unlimited package and the following minimum equipment and software.

Windows:

- a hard disk with at least 1 MB of free space
- a CD-ROM drive
- Windows 98, Windows 95, Windows NT 4.0 (with Service Pack 3 or later)
- Java™ Runtime Environment (JRE) 1.1.8

Mac OS:

- a hard disk with at least 1 MB of free space
- a CD-ROM drive
- Mac OS 8.6 or later
- Mac OS Runtime Java (MRJ) 2.1.4

Mac OS X Server:

- Mac OS X Server 1.02
- Apache 1.3.6

Operating system	Supported server(s)
Windows NT Server	Microsoft Internet Information Server (IIS)
	Netscape Enterprise Server (NES)
Windows NT Workstation, Windows 98, Windows 95	Microsoft Personal Web Server (PWS)
Mac OS 8.6	AppleShareIP 6.2
	WebSTAR 4.0
Mac OS X Server 1.02	Apache 1.3.6

Web publishing requirements

To publish a database on the Web using the FileMaker Pro Web Companion, you need a host computer with continuous access to the Internet or an intranet via TCP/IP.

Important Access to the Internet requires an Internet service provider (ISP). FileMaker Pro does not provide an Internet account for you.

Where to place database and HTML files

Keep the following points in mind:

- Place database files on the same machine as their FileMaker Pro 5 Unlimited or FileMaker Server 5 host, because this arrangement provides the best performance. Databases do not need to be stored in any particular location to function properly.

- Dynamic web pages that reference FileMaker Pro must reside on the same machine as their FileMaker Pro 5 Unlimited host, in the Web folder located within the FileMaker Pro folder.

- Static HTML and image files should reside on your web server, as specified by your web server software.

Terms used in this guide

The following terms are used in this guide:

Term	Definition
Active database	A database configured through the Web Server Connector and hosted by a FileMaker Web Companion.
CDML	Claris Dynamic Markup Language, a collection of proprietary tags used to command FileMaker Pro databases via a web browser.
Client	A guest accessing a FileMaker Pro database.
Configured database	A database configured through the Web Server Connector, but not yet hosted by a FileMaker Web Companion.
Fail-over	An internal procedure to switch to the next available host in a RAIC if the Web Server Connector loses contact with a previously available host.
Format file	An HTML page that contains CDML tags.
HTML	HyperText Markup Language, the text-based code that is used for formatting web pages.
Local host, localhost	A machine hosting a database, when the database physically resides on that machine.
Node	A machine in a RAIC that hosts files via the FileMaker Pro 5 Unlimited Web Companion.
Plug-in	Software that extends the capabilities of an application in a specific way. FileMaker Pro Web Companion and ODBC Data Access Companions are FileMaker Pro plug-ins.
RAIC	Redundant Array of Inexpensive Computers. A RAIC links two or more computers to a web server, and uses redundancy to increase throughput and provide fault tolerance.
Remote host	A machine hosting a database that physically resides on another machine.

Term	Definition
Servlet	A Java-based web server extension that is an alternative to traditional, platform-specific CGIs.
Servlet engine	The component of the servlet that arbitrates the interaction of the web server and external applications.
Web Companion	A FileMaker Pro plug-in that dynamically delivers data from FileMaker Pro 5 files via HTTP to a web browser.
Web server	The machine running the HTTP server software that hosts your web site.

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Chapter 2
About the Web Server Connector

The FileMaker Pro Web Server Connector resides on your web server. It relays FileMaker requests for XML, CDML, and other dynamic content to one or more computers running FileMaker Pro 5 Unlimited. The FileMaker Web Server Connector is a *servlet*, a standard Java-based mechanism for extending the functionality of a web server.

With the FileMaker Pro application and its Web Companion plug-in, you can publish your databases on the World Wide Web or an intranet. This built-in functionality enables FileMaker Pro to function as a web server, delivering data from FileMaker Pro 5 files to a web browser. Data shared in this manner through the Web Companion can be accessed from client machines that have appropriate network access and browser software.

With the FileMaker Web Server Connector you can extend the functionality of FileMaker Pro to:

- take advantage of other plug-ins and features of your web server, including secure socket layer (SSL) protection and server-side includes

- configure a RAIC to increase throughput and reliability

- store static elements such as graphic images on the web server, bypassing the FileMaker Pro Web Companion for pages that do not contain Instant Web Publishing, XML, or CDML elements

In addition to these server-derived benefits, the FileMaker Web Server Connector lets you:

- organize and configure the sharing of databases

- host by multiple, separate installations of FileMaker Pro 5 Unlimited

- configure the sharing of databases by host or by database

- detect when the Web Companion on one machine is not responding, and redirect requests to the next available machine in a RAIC

Configurations

Many different configurations are possible with the Web Server Connector. In some cases, you can combine elements of several configurations to meet your needs.

When used in a RAIC, the performance of the Web Server Connector has been optimized for use with up to five RAIC machines. You can continue to see performance gains beyond this number, but the benefits of adding machines will be less significant.

Configuration 1: FileMaker Pro 5 Unlimited on a single machine
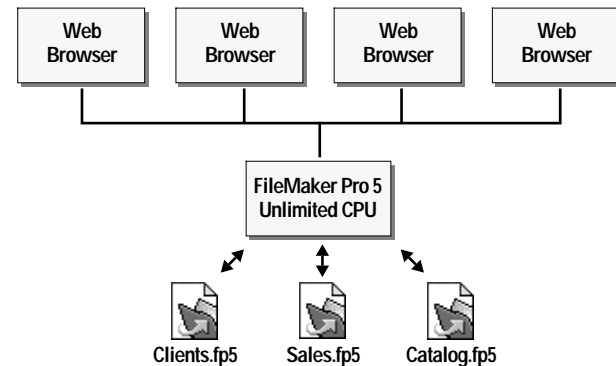
In this configuration, one or more databases are hosted on a single machine. FileMaker Pro 5 Unlimited acts as a web server and database host using its built-in Web Companion plug-in.

Configuration 2: FileMaker Pro 5 Unlimited, the Web Server Connector, and web server software on a single machine
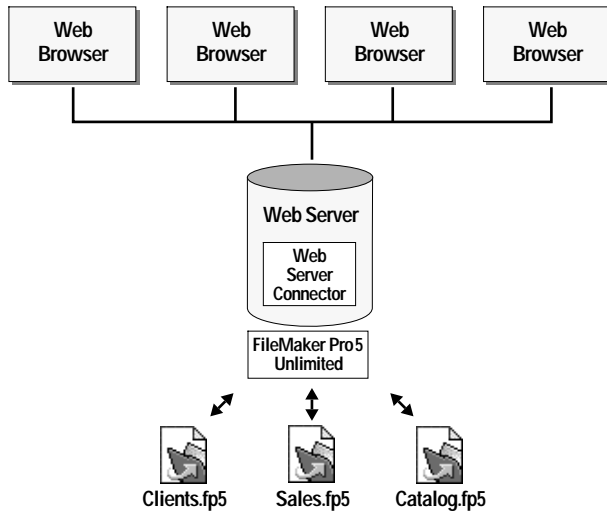
In this configuration, FileMaker Pro 5 Unlimited and the Web Server Connector are installed directly on the web server machine. This configuration delivers the server-derived benefits of the Web Server Connector, but it is not recommended for performance reasons.

Configuration 3: FileMaker Pro 5 Unlimited on one machine, the Web Server Connector on another machine
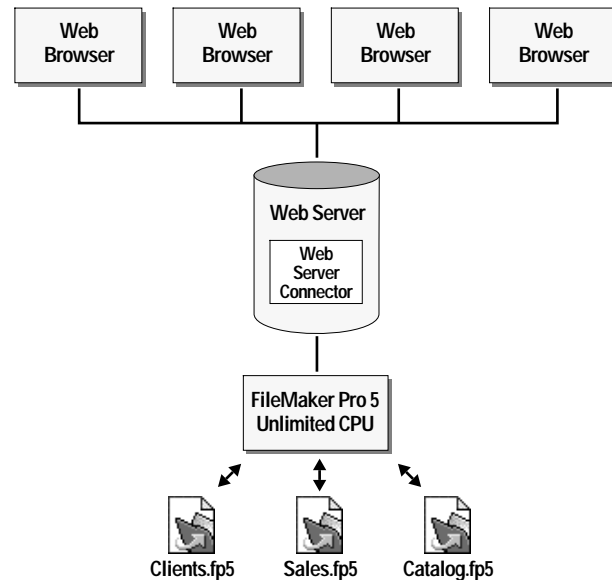
In this configuration, FileMaker Pro 5 Unlimited hosts databases on one machine, and the Web Server Connector resides on another. This is a preferred configuration, because you are able to take advantage of the server-derived benefits of the Web Server Connector using only two machines.

Configuration 4: RAIC with multiple copies of the same databases

Web Browser	Web Browser	Web Browser	Web Browser

Web Server

Web Server Connector

FileMaker Pro 5 Unlimited CPU	FileMaker Pro 5 Unlimited CPU	FileMaker Pro 5 Unlimited CPU

Catalog.fp5   Catalog.fp5   Catalog.fp5
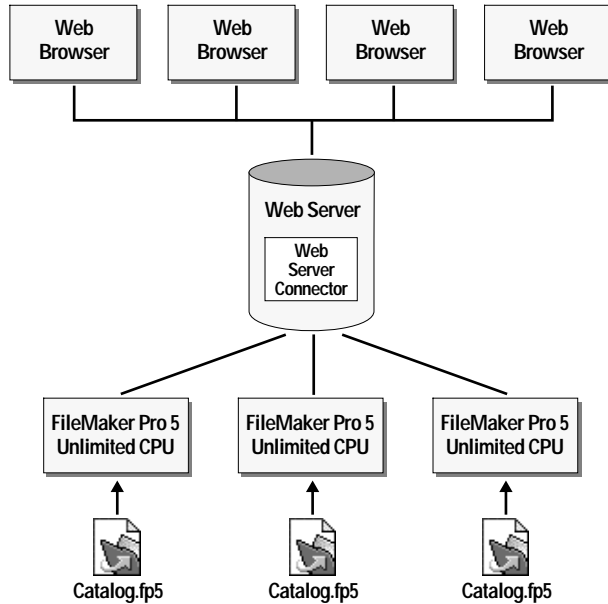
In this configuration, identical copies of the same database(s) are hosted from multiple copies of FileMaker Pro 5 Unlimited. The Web Server Connector channels the request to the next available database in the RAIC, according to the internal list kept by the Web Server Connector.

This is an excellent configuration for serving data such as a catalog. The redundancy of sharing multiple copies of the same database produces excellent throughput, speed, and fail-over protection: if a host crashes or is brought off line, the Web Server Connector moves to the next host on its internal list.

However, this redundancy makes it difficult to input and modify data. Because the Web Server Connector releases a database after a request has been processed, that database becomes available immediately as a node of the RAIC. This means that it is possible to encounter a different node of the RAIC with each request or transaction. When the contents of a record are duplicated in other databases, it is difficult to reconcile changes.

Important Using read-only databases in this type of RAIC is strongly recommended.

Configuration 5: RAIC with multiple, different databases

Web Browser	Web Browser	Web Browser	Web Browser

Web Server

Web Server Connector

FileMaker Pro 5 Unlimited CPU	FileMaker Pro 5 Unlimited CPU	FileMaker Pro 5 Unlimited CPU

Sales.fp5   Catalog.fp5   Invoice.fp5

Orders.fp5   Clients.fp5
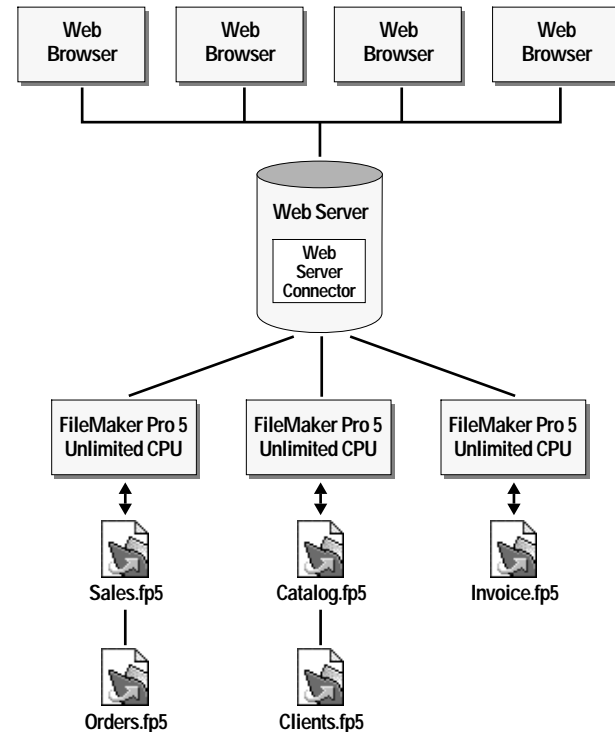
In this configuration, individual databases are spread over several hosts. Because the databases are not duplicated, your clients can both read and write to them. This arrangement offers good throughput, because multiple hosts ease the load that would otherwise be given to a single host, and can provide a means for some load balancing if the most active databases are put on separate machines.

Configuration 6: RAIC using FileMaker Server 5 as a backend host
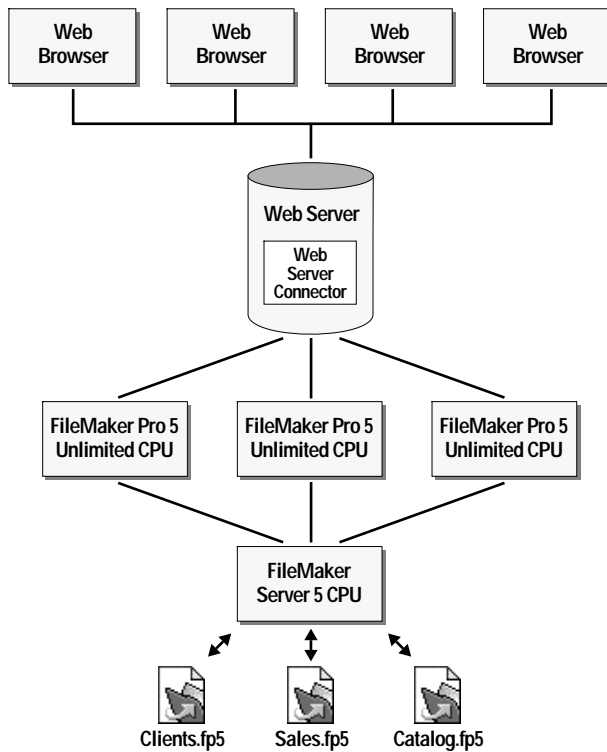
In this configuration, FileMaker Server 5 hosts all of the databases. The nodes of the RAIC open the databases as guests of FileMaker Server 5, sharing through the Web Companion in each copy of FileMaker Pro Unlimited.

This arrangement offers excellent throughput, because the Web Server Connector can provide load balancing and fail-over protection. FileMaker Server 5 also off-loads functions such as sorting and summary field calculations to guest machines, so these tasks are handled rapidly. You can read and write to the databases in this type of RAIC, because each database exists once on the server. And, you can use the backup and restore features of FileMaker Server 5, providing you with added data security.

Configuration 7: RAIC using FileMaker Pro as a backend host
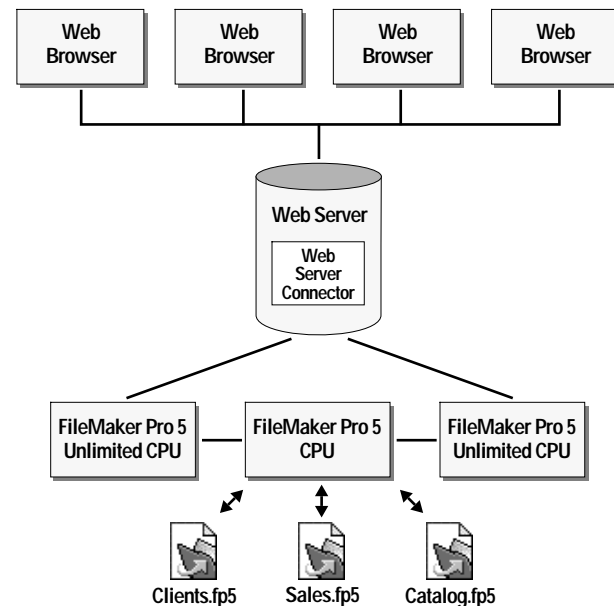
This configuration is similar to the previous RAIC structure. However, instead of using FileMaker Server 5 as a backend host, you use a dedicated copy of FileMaker Pro 5 to host the databases, and share them from the Web Companions of FileMaker Pro Unlimited running on the guest machines. Because this backend machine will be hosting databases using peer-to-peer networking, you can use a copy of either FileMaker Pro 5 or FileMaker Pro Unlimited. If FileMaker Pro 5 Unlimited is used in place of FileMaker Pro 5, then this machine can also be used as a RAIC machine for added performance.

As in the previous RAIC configuration, this structure provides the advantages of load balancing and fail-over protection. Because there is a single instance of each database, you can read and write to these files.

Security considerations

To ensure proper authentication, make sure all nodes of the RAIC have consistent security. For example, you may experience unexpected behavior if you enable security on one machine but not on other machines in the RAIC, or if your FileMaker Pro 5 passwords are different across the nodes of the RAIC.

Where to go from here

To install the FileMaker Web Server Connector, go to the chapter that is appropriate for your specific server installation.

For instructions on installing the Web Server Connector on	See
Microsoft Internet Information Server Microsoft Personal Web Server	Chapter 3, "Installing the FileMaker Pro Web Server Connector on Microsoft IIS and PWS"
Netscape Enterprise Server	Chapter 4, "Installing the FileMaker Pro Web Server Connector on Netscape Enterprise Server"
AppleShare IP WebSTAR	Chapter 5, "Installing the FileMaker Pro Web Server Connector with AppleShare IP and WebSTAR"
Mac OS X Server	Chapter 6, "Installing the FileMaker Pro Web Server Connector on Apache (Mac OS X Server)"

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Chapter 3
Installing the FileMaker Pro Web Server Connector on Microsoft IIS and PWS

This chapter explains how to install the FileMaker Pro Web Server Connector with Microsoft Personal Web Server (Windows 95, Windows 98, Windows NT Workstation 4.0) and Microsoft Internet Information Server (Windows NT Server 4.0).

The FileMaker Pro Web Server Connector uses the same installer for Personal Web Server and Internet Information Server.

Installing with Microsoft Internet Information Server and Microsoft Personal Web Server

Important Installing this program requires you to restart your server. Before you begin the installation process, save your work, exit other open programs, and turn off virus protection utilities. Remember to turn on virus protection utilities again when the installation is complete.

Note Internet Information Server or Personal Web Server must be installed prior to the installation of the FileMaker Pro Web Server Connector. For IIS or PWS installation instructions, refer to the documentation included with your web server software.

Windows NT Server/IIS If you use the FileMaker Pro 5 Web Security database to control user name and password access, you must establish Windows NT accounts with these same user names and passwords. IIS authenticates these before passing them on to FileMaker Pro.

Windows NT Workstation/PWS If you are installing the Web Server Connector on Windows NT Workstation with PWS, you must disable Basic Authentication prior to installing the Web Server Connector.

To disable Basic Authentication, Internet Connection Services for RAS must be installed, as it is required to access the Internet Services Manager. Installing Internet Connection Services for RAS is an option in the Windows NT 4.0 Option Pack installer. If Internet Connection Services for RAS was not installed as part of the Option Pack 4.0 installation, you must uninstall the Option Pack and reinstall it with this option enabled. Refer to the documentation included with your server software for instructions on this procedure.

To install the Web Server Connector:

1. Insert the Web Server Connector CD-ROM into the CD-ROM drive.

2. Click the arrow next to Install FileMakerWSC5-IIS to begin the installation.

3. In the Welcome screen, click Next.

4. In the Software License Agreement screen, click Yes if you accept the terms of the license agreement.

5. In the Read Me screen, review the contents for any late-breaking information about the Web Server Connector, then click Next.

6. In the Choose Destination Location installation dialog box, click Next to install the Web Server Connector.

Important Do not change the default installation location.

Accept the default location
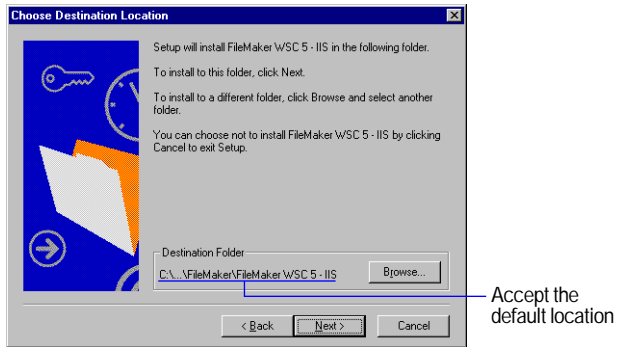
The Web Server Connector files are installed.

Note The Web Server Connector stops installation if it detects another, previously installed servlet engine on your web server. For information about installing the Web Server Connector with other servlet engines, see the ReadMe file in the Unsupported folder (Web Server Connector CD-ROM\Unsupported\ReadMe).

7. Restart your server to launch the Web Server Connector.

Windows NT users If you are installing the Web Server Connector on Windows NT, you must enable Basic (Clear Text) Password Authentication before configuring the Web Server Connector. Refer to the documentation included with your server software for instructions on this procedure.

Important Do not use high ASCII characters in user names, as these may cause authentication failures.

Tip On Windows NT, a -401 ("Invalid User Name") error can indicate that a user name and password have not been registered with the operating system. When using the FileMaker Web Server Connector on Windows NT, use the same user name and password for Windows NT and the FileMaker Pro databases you intend to host. IIS instructs Windows NT to authenticate these before passing them on to FileMaker Pro.

The Web Server Connector is now running. See chapter 7, "Using the Web Server Connector as host," for configuration instructions.

Uninstalling the FileMaker Pro Web Server Connector

1. Stop IIS/PWS services.

2. Open the Add/Remove Programs control panel.

3. In the Install/Uninstall tab, select FileMaker WSC 5-IIS from the list.

Note The Uninstall command removes all files that have been installed, but does not remove files generated by the Web Server Connector after it has been launched. Examples of files not removed include .PROPERTIES files, .LOG files, and ISAPI filter entries, which must all be removed manually.

4. Click Add/Remove.

It is recommended that you restart your server at this time.

Removing the ISAPI filter entry

1. Launch the Internet Service Manager application (IIS) or Microsoft Management Console (PWS).

2. Right-click on your server icon and choose Properties from the context menu.

3. From the Master Properties menu, select WWW Service, then click Edit.

4. Select the ISAPI Filters tab.

5. Select fmwsc_isapi and click Remove.

6. Click OK, then click OK again.

7. Restart the web server software to reload your remaining filters.

Where files are stored on your hard disk

The following tables show the files and folders you install as part of the Web Server Connector installation

Where to go from here

After you install the FileMaker Pro Web Server Connector, see chapter 7, "Using the Web Server Connector as host," for instructions to configure the Web Server Connector for use..

Folder location Microsoft IIS and PWS	File or folder	Description
c:\program files\ filemaker\ filemaker wsc 5 - IIS	FileMaker WSC Admin.url	URL link file
	JSDK License.txt	Java Servlet Development Kit license
	License.txt	FileMaker, Inc., license
	ReadMe.txt	FileMaker, Inc., Read Me
	Unist.isu	Uninstall file for each FMWSC server installation
c:\program files\filemaker\filemaker wsc 5 - IIS\jre	Changes	Java runtime environment file
	Copyright	Java runtime environment file
	Fixes.lst	Java runtime environment file
	License	Java runtime environment file
	ReadMe	Java runtime environment file
c:\program files\filemaker\filemaker wsc 5 - IIS\jre\bin	Ibmjitc.dll	Java runtime environment file
	Javai.dll	Java runtime environment file
	Javakey.exe	Java runtime environment file
	JdbcOdbc.dll	Java runtime environment file
	Jpeg.dll	Java runtime environment file
	Jre.exe	Java runtime environment file
	Jrew.exe	Java runtime environment file
	Math.dll	Java runtime environment file
	Mmedia.dll	Java runtime environment file
	Msvcrt.dll	Java runtime environment file
	Net.dll	Java runtime environment file

Folder location Microsoft IIS and PWS	File or folder	Description
	Rmiregistry.exe	Java runtime environment file
	Sysresource.dll	Java runtime environment file
	Winawt.dll	Java runtime environment file
	Zip.dll	Java runtime environment file
c:\program files\filemaker\filemaker wsc 5 - IIS\jre\bin\lib	awt.properties	Java runtime environment library file
	Content-types.properties	Java runtime environment library file
	Font.properties	Java runtime environment library file
	Font.properties.ar	Java runtime environment library file
	Font.properties.be	Java runtime environment library file
	Font.properties.bg	Java runtime environment library file
	Font.properties.cs	Java runtime environment library file
	Font.properties.el	Java runtime environment library file
	Font.properties.et	Java runtime environment library file
	Font.properties.hr	Java runtime environment library file
	Font.properties.hu	Java runtime environment library file
	Font.properties.iw	Java runtime environment library file
	Font.properties.ja	Java runtime environment library file
	Font.properties.ko	Java runtime environment library file
	Font.properties.lt	Java runtime environment library file
	Font.properties.lv	Java runtime environment library file
	Font.properties.mk	Java runtime environment library file
	Font.properties.pl	Java runtime environment library file
	Font.properties.ro	Java runtime environment library file
	Font.properties.ru	Java runtime environment library file
	Font.properties.s2	Java runtime environment library file
	Font.properties.sk	Java runtime environment library file
	Font.properties.sl	Java runtime environment library file
	Font.properties.th	Java runtime environment library file
	Font.properties.tr	Java runtime environment library file

Folder location Microsoft IIS and PWS	File or folder	Description
	Font.properties.uk	Java runtime environment library file
	Font.properties.yu	Java runtime environment library file
	Font.properties.zh	Java runtime environment library file
	Font.properties.zh_TW	Java runtime environment library file
	I18n.jar	Java runtime environment library file
	Math.jar	Java runtime environment library file
	Rt.jar	Java runtime environment library file
c:\program files\filemaker\filemaker wsc 5 - IIS\jre\bin\security	Java.security	Java runtime environment security file
c:\program files\filemaker\filemaker wsc 5 - IIS\lib	FMWSC.jar	FileMaker Web Server Connector servlet
	FMWSCResources.jar	Strings and supporting HTML pages for WSC servlet
	Servlet.jar	Servlet API
c:\Inetpub\scripts\	FMWSC_NSAPI.dll	Plug-in API

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Chapter 4
Installing the FileMaker Pro Web Server Connector on Netscape Enterprise Server

This chapter explains how to install the FileMaker Pro Web Server Connector with Netscape Enterprise Server (Windows 95, Windows 98, Windows NT Workstation 4.0, and Windows NT Server 4.0).

Installing with Netscape Enterprise Server

Important Installing this program requires you to restart your server. Before you begin the installation process, save your work, exit other open programs, and turn off virus protection utilities. Remember to turn on virus protection utilities again when the installation is complete.

1. Insert the Web Server Connector CD-ROM into the CD-ROM drive.

2. Click the arrow next to Install FileMakerWSC5-NES to begin the installation.

Click this arrow

3. In the Welcome screen, click Next.

4. In the Software License Agreement screen, click Yes if you accept the terms of the license agreement.

5. In the Read Me screen, view the contents for any late-breaking information about the Web Server Connector, then click Next.

6. In the Choose Destination Location installation dialog box, click Next.

Important It is recommended that you install the Web Server Connector in the default installation location, because you may experience inconsistent results if the Web Server Connector is installed elsewhere.

Accept the default location
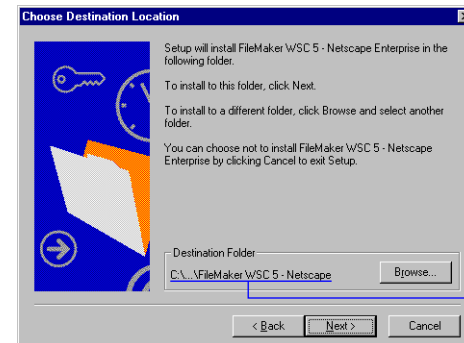
7. Click Next to install the Web Server Connector files.

Note The Web Server Connector stops installation if it detects another, previously installed servlet engine on your web server. For information about installing the Web Server Connector with other servlet engines, see the ReadMe file in the Unsupported folder (Web Server Connector CD-ROM\Unsupported\ReadMe).

8. Click Yes to update the Obj.conf file.

Important The installer must make changes and entries to this file for the Web Server Connector to function properly. Only experienced NES administrators should modify this file manually.

9. Restart your server to launch the Web Server Connector.

Important Do not use high ASCII characters in user names, because they may cause authentication failures.

The Web Server Connector is now running. See chapter 7, "Using the Web Server Connector as host," for configuration instructions.

Uninstalling the FileMaker Pro Web Server Connector

1. Stop NES services.

2. Open the Add/Remove Programs control panel.

3. In the Install/Uninstall tab, select FileMaker WSC 5-NES from the list.

4. Click Add/Remove.

Where to go from here

See chapter 7, "Using the Web Server Connector as host," for instructions to configure the Web Server Connector for use.

Where files are stored on your hard disk

The following tables show the files and folders you install as part of
the Web Server Connector installation.

Folder location Netscape Enterprise Server	File or folder	Description
c:\program files\filemaker\filemaker wsc 5 - netscape enterprise\	EditObjConf.class	Configure file for each server installation, as NES allows multiple server installations on a single machine
	FileMaker WSC Admin.url	URL link file
	FMWSC_NSAPI.dll	Plug-in API
	JSDK License.txt	Java Servlet Development Kit license
	License.txt	FileMaker, Inc., license
	ReadMe.txt	FileMaker, Inc., Read Me
	Unist-https-[server name].isu	Uninstall file for each FMWSC server installation
	VerifyObjConf.class	Configure file for each server installation, because NES allows multiple server installations on a single machine
c:\program files\filemaker\filemaker wsc 5 - netscape enterprise\https-[server name]	Verify.log	Server-specific component
	VerifyObjConf.bat	Server-specific component
c:\program files\filemaker\filemaker wsc 5 - netscape enterprise\https-[server name]\jre	Changes	Java runtime environment file
	Copyright	Java runtime environment file
	Fixes.lst	Java runtime environment file
	License	Java runtime environment file
	ReadMe	Java runtime environment file

Folder location Netscape Enterprise Server	File or folder	Description
c:\program files\filemaker\filemaker wsc 5 - netscape enterprise\https-[server name]\jre\bin	Ibmjitc.dll	Java runtime environment file
	Javai.dll	Java runtime environment file
	Javakey.exe	Java runtime environment file
	JdbcOdbc.dll	Java runtime environment file
	Jpeg.dll	Java runtime environment file
	Jre.exe	Java runtime environment file
	Jrew.exe	Java runtime environment file
	Math.dll	Java runtime environment file
	Mmedia.dll	Java runtime environment file
	Msvcrt.dll	Java runtime environment file
	Net.dll	Java runtime environment file
	Rmiregistry.exe	Java runtime environment file
	Sysresource.dll	Java runtime environment file
	Winawt.dll	Java runtime environment file
	Zip.dll	Java runtime environment file
c:\program files\filemaker\filemaker wsc 5 - netscape enterprise\https-[server name]\jre\lib	Awt.properties	Java runtime environment library file
	Content-types.properties	Java runtime environment library file
	Font.properties	Java runtime environment library file
	Font.properties.ar	Java runtime environment library file
	Font.properties.be	Java runtime environment library file
	Font.properties.bg	Java runtime environment library file
	Font.properties.cs	Java runtime environment library file
	Font.properties.el	Java runtime environment library file
	Font.properties.et	Java runtime environment library file
	Font.properties.hr	Java runtime environment library file
	Font.properties.hu	Java runtime environment library file
	Font.properties.iw	Java runtime environment library file

Folder location Netscape Enterprise Server	File or folder	Description
	Font.properties.ja	Java runtime environment library file
	Font.properties.ko	Java runtime environment library file
	Font.properties.lt	Java runtime environment library file
	Font.properties.lv	Java runtime environment library file
	Font.properties.mk	Java runtime environment library file
	Font.properties.pl	Java runtime environment library file
	Font.properties.ro	Java runtime environment library file
	Font.properties.ru	Java runtime environment library file
	Font.properties.s2	Java runtime environment library file
	Font.properties.sk	Java runtime environment library file
	Font.properties.sl	Java runtime environment library file
	Font.properties.th	Java runtime environment library file
	Font.properties.tr	Java runtime environment library file
	Font.properties.uk	Java runtime environment library file
	Font.properties.yu	Java runtime environment library file
	Font.properties.zh	Java runtime environment library file
	Font.properties.zh_TW	Java runtime environment library file
	I18n.jar	Java runtime environment library file
	Math.jar	Java runtime environment library file
	Rt.jar	Java runtime environment library file
c:\program files\filemaker\filemaker wsc 5 - netscape enterprise\https-[server name]\jre\lsecurity	Java.security	Java runtime environment security file
c:\program files\filemaker\filemaker wsc 5 - netscape enterprise\https-[server name]\lib	FMWSC.jar	FileMaker Web Server Connector servlet
	FMWSCResources.jar	Strings and supporting HTML pages for WSC servlet
	Servlet.jar	Servlet API

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Chapter 5
Installing the FileMaker Pro Web Server Connector with AppleShare IP and WebSTAR

This chapter explains how to install the FileMaker Pro Web Server Connector with AppleShare IP 6.2 and WebSTAR 4.0 on Mac OS 8.6 and higher.

Installing with AppleShare IP and WebSTAR

Important Installing this program requires you to restart your server. Before you begin the installation process, save your work, exit other open programs, and turn off virus protection utilities. Remember to turn on virus protection utilities again when the installation is complete.

1. Shut down the AppleShare IP server or WebSTAR server if they are active. For information about doing this, see the documentation that came with your server.

2. Insert the Web Server Connector CD-ROM into the CD-ROM drive on the web server machine.

3. Double-click the FileMaker WSC 5 icon to begin the installation.

4. In the Software License Agreement screen, click Accept if you agree to the terms of the license agreement.

5. In the Read Me screen, view the contents for any late-breaking information about the Web Server Connector, then click Continue.

6. In the FileMaker Web Server Connector dialog box, choose Select Folder from the Install Location pop-up menu.

7. Select the Web folder currently being used as the root directory for AppleShare IP or WebSTAR.

Note The Web Server Connector stops installation if it detects another, previously installed servlet engine on your web server. For information about installing the Web Server Connector with other servlet engines, see the ReadMe file in the Unsupported folder (Web Server Connector CD-ROM\Unsupported\ReadMe).

8. When the installation is complete, click Quit.

9. Restart your server to launch the Web Server Connector.

The Web Server Connector is now running. See chapter 7, "Using the Web Server Connector as host," for configuration instructions.

Considerations after installation

AppleShare IP requires that you share the AppleShare IP Web folder. It is important that you restrict access to the FMWSC.properties and FMWSC.log files after installation. These files are stored in the Web folder, and items with unrestricted access may be available through a client's web browser.

Where to go from here

See chapter 7, "Using the Web Server Connector as host," to begin configuring the Web Server Connector for use.

Where files are stored on your hard disk

The following tables show the files and folders you install as part of
the Web Server Connector installation.

Folder location AppleShare IP	File or folder	Description
Macintosh HD:FileMaker WSC 5	License	FM WSC license
	JSDK License	Java license
	ReadMe	FM Read Me
	FMWSC Configuration Page	Link to configuration page
Macintosh HD:FileMaker WSC 5:lib	FMWSCResources.jar	Strings and HTML pages used by the WSC
	FMWSC.jar	Servlet
	Servlet.jar	Servlet API
Macintosh HD:FileMaker WSC 5:Plug-Ins	FMWSC	The Web Server Connector plug-in

| Folder location WebSTAR	File or folder	Description
Macintosh HD:WebSTAR Server Suite 4.0:FileMaker WSC 5	License	FM WSC license
	JSDK License	Java license
	ReadMe	FM Read Me
	FMWSC Configuration Page	Link to configuration page
Macintosh HD:WebSTAR Server Suite 4.0:lib	FMWSCResources.jar	Strings and HTML pages used by the WSC
	FMWSC.jar	Servlet
	Servlet.jar	Servlet API
Macintosh HD:WebSTAR Server Suite 4.0:Plug-Ins	FMWSC	The Web Server Connector plug-in

Chapter 6
Installing the FileMaker Pro Web Server Connector on Apache (Mac OS X Server)

This chapter explains how to install the FileMaker Pro Web Server Connector on Apache (Mac OS X Server).

Installing with Apache

Important Before you begin the installation process, save your work and exit other open programs, and turn off virus protection utilities. Remember to turn on virus protection utilities again when the installation is complete.

1. Insert the Web Server Connector CD-ROM into the CD-ROM drive.

2. Locate the file fmwsc.pkg.tar on the CD-ROM, and copy it to your hard drive.

3. Double-click the file.

4. In the Archive Inspector dialog box, choose Unarchive.

5. Double-click the file fmwsc.pkg in the same directory as fmwsc.pkg.tar.

6. In the FMWSC for Apache dialog box, click Install.
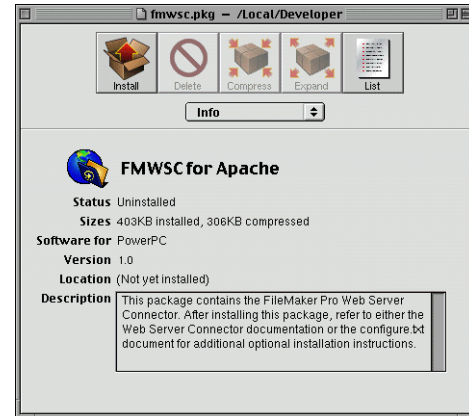
Important It is recommended that you install the Web Server Connector in the default installation location.

7. Click Install to launch the Install Package script.

You see the message Installation completed if the installation completes without error.

Important If you encounter an error during installation, click List in the FMWSC for Apache dialog box to display the error. You must resolve all errors before attempting installation again.

8. After installation is complete, click List to see a detailed report of the names and locations of all installed files.

Note The original apache.conf file is renamed apache.conf.prefmwsc.*[temp ID number]* as part of the installation process. *Temp ID number* is used to differentiate previous copies of apache.conf; no apache.conf files are overwritten as part of the installation. If you need to restore your original (or a subsequent) apache.conf file, delete the file named apache.conf, which is the most recent configuration file, and rename the apache.conf.prefmwsc.*[temp ID number]* file with the earliest date and time stamp to apache.conf.

9. Launch FMWSC_Apache.sh, which is located in the directory <fmwsc install dir>/bin.

Important Apache requires that you launch this script each time before using the Web Server Connector. Once launched, the script window must remain open for the Web Server Connector to function properly. Proper functioning of this script does not necessarily indicate that the FMWSC_Apache.so module (located in the Apache Modules folder) is also functioning properly. If you experience difficulties, you may need to use a means other than this script to verify that the FMWSC_Apache.so module is running correctly.

10. Enter the following URL to access the Web Server Connector Administration Account:

`http://`*host server name*`/FMPro?config`

where *host server name* is the host name of your server (for example, www.filemaker.com).

11. To stop the Web Server Connector, press Ctrl+C in the terminal window in which the Web Server Connector is running, or close the window.

Considerations when installing and configuring

Changing the port number

By default, the Web Server Connector is configured to only accept requests on port 8888 from Apache. To change this port number:

1. Add the following line to the end of the apache.conf file:

`FMWSC_Instances 127.0.0.1:<port number>`

2. Restart the Apache web server.

3. Edit the FMWSC_Apache.sh file and add the following option to the end of the java command:

`-port <port number>`

where *<port number>* is the port number you want to use.

4. Relaunch FMWSC_Apache.sh.

Running on a remote machine

By default, the FMWSC is installed on the same machine as the Apache web server and only accepts requests from the local machine (IP address 127.0.0.1). To run the Web Server Connector on a remote machine:

1. Add the following line to the end of apache.conf:

`FMWSC_Instances <ip address>`

where *<ip address>* is the IP address of the machine on which the Web Server Connector will run.

2. Restart the Apache Web Server.

3. Copy the FMWSC directory to the remote machine.

4. Copy the Apache mime.types file to the FMWSC directory on the remote machine.

5. Edit FMWSC_Apache.sh by doing the following:

■ Change the -root parameter to point to the directory on the remote machine used as the root document directory. Change the -mimetypes parameter to point to the mime.types file in the FMWSC directory.

■ Add the following parameter to the end of the Java command:

`–allow <ip address>`

where *<ip address>* is the IP address of the machine on which the Apache Web Server is running.

FMWSC_Apache.sh parameters

The FMWSC_Apache.sh file invokes the FMWSC_Apache Java class, and passes parameters to it. The following table describes the parameters this class accepts.

Parameter	Description
-help	Displays a description of the parameters
-port *<port number>*	Port number (default=8888)
	The -port parameter indicates which port the Web Server Connector listens on for incoming requests.
-backlog *<length>*	Incoming connection queue length (default=50)
	The -backlog parameter indicates how many requests are queued.
-root *<directory>*	Server's root document directory (mandatory)
	The -root parameter indicates the root document directory for the Apache web server.
-mimetypes *<file>*	Path to mime.types file (optional)
	The -mimetypes parameter indicates the location of the Apache server mime.types file.

Parameter	Description
-allow *<ip1,ip2,etc.>*	Allowed IP addresses (default=127.0.0.1)
	The -allow parameter indicates the IP addresses which can send requests to the FMWSC. You can specify an IP address with an asterisk to indicate all values (for example, 168.121.97.*).

Changing the VM settings and Classpath

You can change the Java VM settings and Classpath. To do so, modify the Java parameters that are passed to the Java command in the FMWSC_Apache.sh file.

Where to go from here

After you install the FileMaker Pro Web Server Connector, see chapter 7, "Using the Web Server Connector as host," to begin configuring the Web Server Connector for use.

Where files are stored on your hard disk

The following tables show the files and folders you install as part of
the Web Server Connector installation.

Folder location Apache (Mac OS X Server)	File or folder	Description
<fmwsc install dir>/fmwsc/bin/	FMWSC_Apache.sh	Shell script
<fmwsc install dir>/fmwsc/	Configure.txt	Instructions for installation
	JSDKLicense.txt	License
<fmwsc install dir>/fmwsc/lib/	FMWSC.jar	Servlet
	FMWSCResources.jar	Strings and HTML pages used by the Web Server Connector
	FMWSC_Apache.jar	Apache file for servlet engine
	Servlet.jar	Servlet API
/usr/local/fmwsc/src/	Mod_fmwsc.c	Raw code
/System/Library/Apache/Modules	Mod_fmwsc.so	Compiled shared object
/Local/Library/Receipts/	Fmwsc.pkg	FMWSC package file

Chapter 7
Using the Web Server Connector as host

With the FileMaker Pro Web Server Connector, you can use your compatible web server software to share databases over the Web from a single host or from multiple hosts.

This chapter explains how to:

■ configure FileMaker Pro 5 Unlimited for use with the Web Server Connector

■ add, remove, and configure host computers

■ add, remove, and configure shared databases
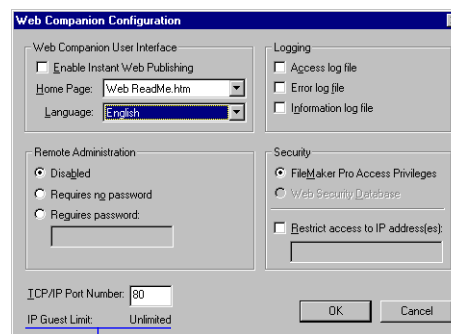
Configuring FileMaker Pro

Your shared databases must be properly configured for use with the FileMaker Pro Web Companion.

Keep these points in mind:

■ For best performance and reliability, store FileMaker Pro databases on the same computer as the FileMaker Pro application that hosts them.

■ Each host machine must have a copy of FileMaker Pro 5 Unlimited.

■ The Web Server Connector can also share databases that are hosted by FileMaker Server 5 and FileMaker Pro peer-to-peer networking, if those databases are opened as guests by FileMaker Pro 5 Unlimited.

■ You must enable the Web Companion on each host machine.

Configuring the FileMaker Pro Web Companion

1. Launch the FileMaker Pro 5 Unlimited application.

2. Choose Edit menu > Preferences > Application.

3. In the Application Preferences dialog box, click the Plug-Ins tab.

4. Enable the Web Companion checkbox.

5. Click the Configure button to open the Web Companion Configuration dialog box.

The IP Guest Limit confirms that
FileMaker Pro 5 Unlimited is installed

6. Verify that you are using FileMaker Pro 5 Unlimited.

Look for the words IP Guest Limit: Unlimited in the lower-left corner of the dialog box.

If you see the words IP Guest Limit: 10, then FileMaker Pro 5 Unlimited is not installed, or was not installed with the correct installation code. Uninstall FileMaker Pro 5, and reinstall FileMaker Pro 5 Unlimited using the installation code included with the FileMaker Pro 5 Unlimited software. See the *FileMaker Pro 5 Getting Started Guide* for more information about installing and uninstalling FileMaker Pro.

Note During operation, the Web Server Connector verifies that it is serving databases hosted from FileMaker Pro 5 Unlimited. Using the Web Server Connector to serve databases from a version of FileMaker Pro other than FileMaker Pro 5 Unlimited generates a FileMaker Pro error.

7. For TCP/IP Port Number, port 80 is the default port for web servers. If you enable the Web Companion on the same machine as the web server, you must use a port number other than port 80. Consider changing the TCP/IP port number to 591. FileMaker, Inc. has registered port number 591 with the Internet Assigned Numbers Authority (IANA) for use with FileMaker Pro Web Companion.

Note To optimize performance, run your web server from a dedicated machine and use other machines as the RAIC nodes.

## Configuring FileMaker Pro databases for web serving

Once you have configured the FileMaker Pro Web Companion, you are ready to open your databases on the host machine.

To share a database using the Web Companion:

1. Open each database you want to host in FileMaker Pro 5 Unlimited.

2. For each database, choose File menu > Sharing.

You can share databases via the Web Companion independent of your FileMaker Network Sharing selection.

Important If you are simultaneously sharing the database from the same machine through another plug-in, such as LDAC or RDAC, performance may be compromised.
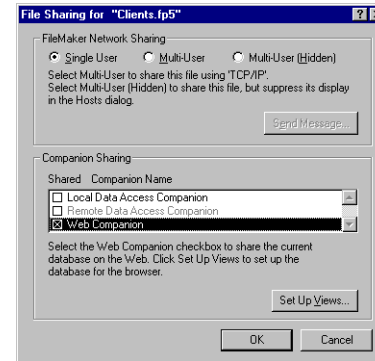
3. In the Companion Sharing area, enable the Web Companion checkbox.

4. Click OK.

5. Verify that the databases you intend to share are correctly configured by pointing your web browser to the IP address of each database host machine.

Important   If a database is not shared by a Web Companion, it cannot be used by the Web Server Connector.

Important For troubleshooting purposes, verify that each potential node of a RAIC setup is working properly before configuring a RAIC structure with the Web Server Connector.

Once your databases are open and being shared by the FileMaker Pro Web Companion, you are ready to configure the Web Server Connector.

Configuring the Web Server Connector Administration Account

You must configure an Administration Account the first time you use the Web Server Connector.

1. Open the Web Server Connector.

Depending on your web server software, do one of the following:

■ For IIS and PWS: On the web server, choose Start menu > Programs > FileMaker WSC IIS > FileMaker WSC Admin.

■ For NES: On the web server, choose Start menu > Programs > FileMaker WSC NES > FileMaker WSC Admin.

■ For AppleShare IP and WebSTAR: On the web server, launch the file FMWSC Configuration Page, located in the FileMaker WSC folder.

■ For Apache, or to configure the Web Server Connector remotely: Point your browser to the IP address or domain name of your web server using the address

http://*your IP address or domain name*/FMPro?config

Use the format 123.456.789.123 or www.yourdomainname.com for *your IP address or domain name*.

Apache FMPro?config is case sensitive, and must be entered exactly as it appears here.

Tip If the database is shared from the same computer as the web server software, you may enter localhost as the domain name.

2. Enter a user name and password at the prompt.

Use the same user name and password as for administrator-level access to your web server.

Note IIS users, enter a user name only.

## *Adding a host to the Web Server Connector*

All administrative interaction with the Web Server Connector is performed through a web browser.

1. Point your browser to the FileMaker WSC Admin page, as described in the previous section.

2. If prompted, enter your user name and password.

3. In the first page of the Web Server Connector, click the Configure by Host link.

Click to go to the Configure by Host page
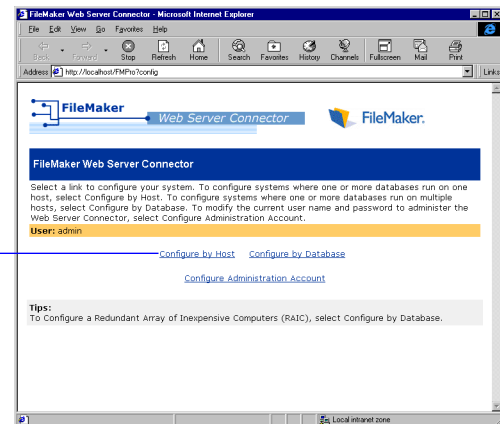
**4**. In the Configure by Host page, click the Add Host button.
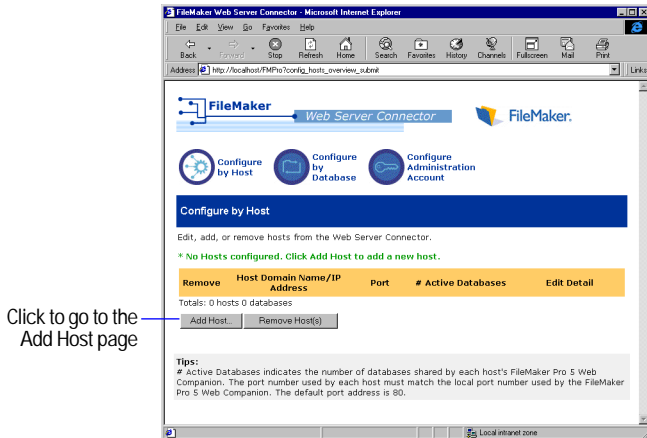
Click to go to the Add Host page

Enter the IP address or domain name

Enter the port number

5. In the Add Host page, for Host, enter the IP address or domain name of the machine hosting the database.

■ If the database is hosted by the same computer as your server software, enter the same IP address or domain name of your server.

■ If the database is hosted by a different computer, enter the IP address or domain name of that machine.

Tip If the database is shared from the same computer as the web server software, you may enter `localhost` as the domain name.
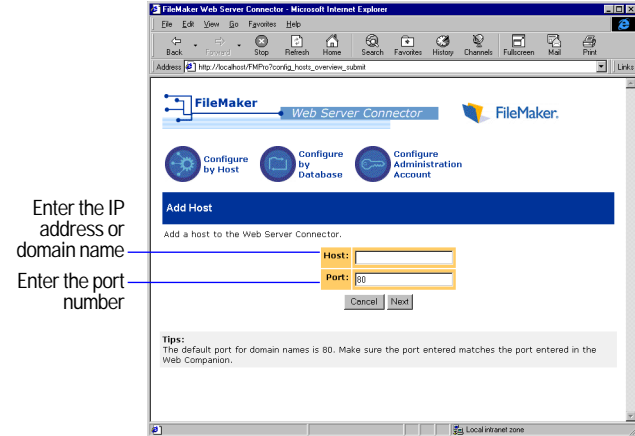
6. For Port, enter the port number used by the Web Companion on the RAIC node machine, then click Next.

Important If your web server machine is functioning as a node of the RAIC, this will likely be port 591 for this machine, as most web servers use port 80 as their default port. For all RAIC nodes, make sure the port number matches that of the RAIC node machine. Otherwise, the Web Server Connector cannot serve your database.

7. Enable the Serve Database checkbox to the right of each database you want to serve.
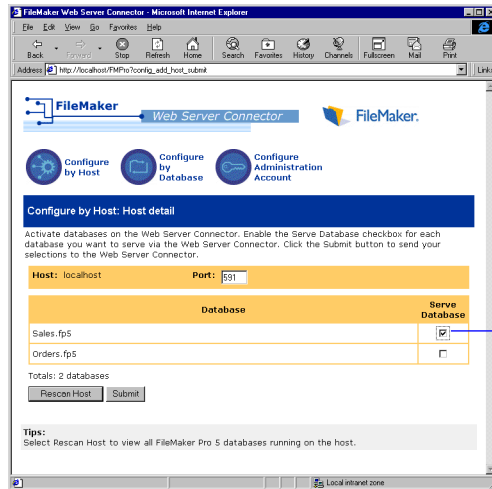
Enable all
appropriate
checkboxes

8. Click the Submit button to send your information to the Web Server Connector.

You see the message Host Updated. This confirms that your changes were made.

9. Repeat steps 3 through 8 for each host.

### Removing a host from the Web Server Connector

1. In the Web Server Connector, click Configure by Host.

2. Select the Remove checkbox to the left of each host you want to remove.

3. Click the Remove Host(s) button.

Adding a database to the Web Server Connector

Configuring by database provides a useful interface for bringing databases into or out of a RAIC.

When you configure by database, you see a list of all databases currently hosted by the Web Server Connector. This feature allows you to see at a glance the number of hosts shared by individual databases.

1. If you are already logged on to the Web Server Connector, go to step 5.

2. Prepare your databases for sharing via the FileMaker Pro Web Companion, as described in "Configuring the FileMaker Pro Web Companion" on page 33.

3. Open the Web Server Connector, as described on page 35.

4. Enter the administrator user name and password at the prompt.

5. From the first page of the Web Server Connector, or from the top of any subsequent page, click the Configure by Database link.
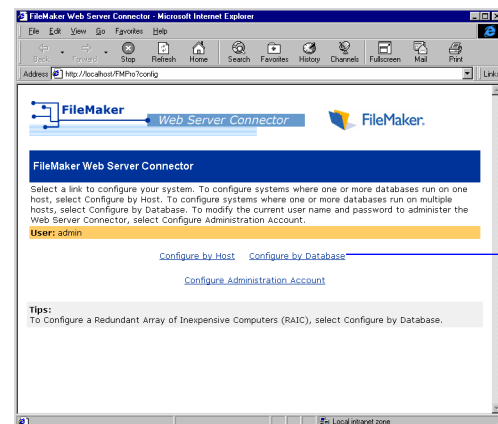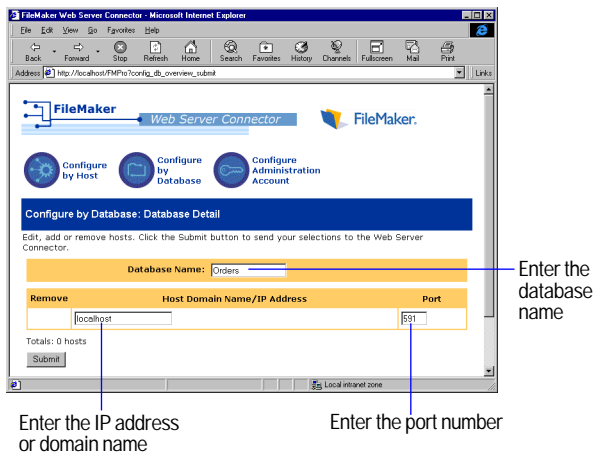

Click to go to the
Configure by
Database page

6. In the Configure by Database page, click the Add Database button.

Click to go to the Database Detail page
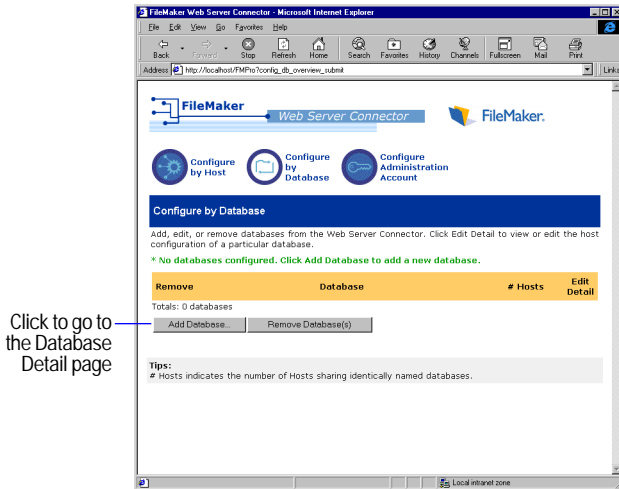
7. In the Database Detail page, for Database Name, enter the name of the database you want to serve.

Enter the database name

Enter the IP address or domain name

Enter the port number

8. For Host Domain Name/IP Address, enter the IP address or domain name of the database's host.

Tip If the database is shared from the same computer as the web server software, enter `localhost` as the domain name.

9. For Port, enter the port number of the host.

Important Make sure the port number matches that of the host, or the Web Server Connector cannot serve your database.

10. Click the Submit button to send your information to the Web Server Connector.

You see the message Database Updated. This confirms that your changes were made.

11. Repeat steps 5 through 10 for each database you want to add.

Tip You can use the Configure by Database page to configure databases for sharing through the Web Server Connector even if those databases aren't currently hosted.

To do this:

1. Launch FileMaker Pro 5 Unlimited on each machine you intend to host from, and make sure that each Web Companion is properly configured for sharing.

2. Enter the name of each database and its port number in the Configure by Database page.

The Web Server Connector will allow you to enter databases on the Configure by Database page without verifying that the databases are currently available over the network, as long as users don't try to access the databases via a browser before they are hosted.

3. Host the database.

This same technique is useful for switching the port numbers of databases that are already being shared through the Web Server Connector.

Removing a database from the Web Server Connector

1. In the Web Server Connector, click Configure by Database.

2. Enable the Remove checkbox to the left of each database you want to remove.

3. Click the Remove Database(s) button.

Configuring the Web Server Connector Administration Account

The Web Server Connector uses an Administration Account name and password to control access and prevent unauthorized changes. Because the Web Server Connector runs on top of your web server software, the Administration Account user name and password must correspond to those of an existing account on your web server. For Windows NT Server, this account must also have Administrator-level access to the directories your web pages are stored in.

Resetting the administrator account

If you forget or lose your Web Server Connector administrator password, you can reset it by deleting the fmwsc.properties file and restarting your web server. This file is recreated the next time the Web Server Connector is launched.

The fmwsc.properties file is located as follows:

Web server	Log file location
PWS	Root of the Web folder
IIS	c:\program files\filemaker\filemaker wsc 5 - IIS\lib\fmwsc.properties
NES	c:\program files\filemaker\filemaker wsc 5 - NES\mwsc.properties
AppleShareIP	Macintosh HD:FileMaker WSC 5:fmwsc.properties

Web server	Log file location
WebSTAR	Macintosh HD:WebSTAR Server Suite 4.0:FileMaker WSC 5:fmwsc.properties
Apache	[install location]/lib/FMWSC.properties

Locating Web Server Connector and Web Companion log files

The Web Server Connector and the FileMaker Pro Web Companion each generate log files which are useful for troubleshooting purposes. The Web Server Connector log files can help you diagnose problems with the Web Server Connector on your web server, and the Web Companion log files can help you isolate problems on individual database host machines.

There are two Web Server Connector log files, FMWSC.log and FMWSCNative.log. These files list the date and time of each server start and close event, as well as all errors reported by the servlet engine and the relay servlet.

Log files are located on the supported web servers as follows:

Web server	Log file location
PWS	Root of the Web folder
IIS	c:\program files\filemaker\filemaker wsc 5 - IIS\FMWSC.log
NES	c:\program files\filemaker\filemaker wsc 5 - NES\FMWSC.log
AppleShareIP	Macintosh HD:FileMaker WSC 5
WebSTAR	Macintosh HD:WebSTAR Server Suite 4.0:FileMaker WSC 5:log
Apache	[install location]/FMWSC.log

To find information about FileMaker Pro 5 Unlimited Web
Companion log files:

1. Launch FileMaker Pro 5 Unlimited.

2. Choose Help menu > Contents and Index.

3. Click the Index tab.

4. Type Web Companion.

5. Choose Tracking web activity in log files from the list of topics that
appear beneath the Web Companion index entry.

Chapter 8
Accessing hosted databases

After the databases are hosted by FileMaker Pro 5 Unlimited, and the Web Server Connector is installed and configured, you are ready to access your FileMaker Pro databases over the Internet or intranet.

This chapter explains how to point end users to databases hosted by the Web Server Connector.

Connecting to databases served by Custom Web Publishing

Point your web browser to the HTML page or index page for the database you want to access.

```
http://web server IP address or domain name/
mysolution.htm
```

Use the format 123.456.789.123/mysolution.htm or www.yourdomainname.com/mysolution.htm for *web server IP address or domain name/mysolution.htm.*

For more information about FileMaker Pro Custom Web Publishing, see the Web ReadMe.htm file in the Web folder in the FileMaker Pro 5 folder.

Connecting to databases served by Instant Web Publishing

1. Point your web browser to the IP address or domain name of the web server.

```
http://web server IP address or domain name/
```

Use the format 123.456.789.123 or www.yourdomainname.com for *web server IP address or domain name.*

You see the FileMaker Pro default page and a list of links to the currently shared databases.

For more information about FileMaker Instant Web Publishing, see chapter 14 of the *FileMaker Pro User's Guide.*

2. From the list, click the database you want to access.

This page intentionally left blank.