

# Blackbelt Quick Start Guide



***CDML is back, and better than ever!***

*FMWebschool has created a solution that enables you to use CDML with FileMaker 7 and 8 and FileMaker Server Advanced.*

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## ***Software Requirements***

**If you will be hosting your own FileMaker databases and the website, you need the following:**

- Apache or IIS Web Server
- PHP with cURL support (PHP v5 and later recommended)
  - Windows Installers can be found at: <http://www.php.net/downloads.php>
  - Mac Installers can be found at: <http://www.entropy.ch/software/macosx/php/>
- For Apache servers we recommend mod\_rewrite for optimal performance, as well as "AllowOverride All" set in your httpd.conf settings

**If you have a FileMaker company hosting your files, you need the following:**

- FTP Client to transfer your files to the hosting company
  - For Windows, we recommend <http://filezilla.sourceforge.net/>
  - For Mac, we recommend to take a look at the extensive list here: [http://en.wikipedia.org/wiki/Comparison\\_of\\_FTP\\_clients#Operating\\_system\\_support](http://en.wikipedia.org/wiki/Comparison_of_FTP_clients#Operating_system_support)
  - For a cross platform solution for Firefox browsers, take a look at <http://fireftp.mozdev.org/>
- Text editor to edit some files if needed, Dreamweaver or TextEdit works well

We recommend Point In Space <http://www.pointinspace.com> John May has already configured his servers for perfect BlackBelt compatibility. You can see a live CDML site at <http://blackbeltdemo.pointinspace.com/>

## Setting up the Database

To begin FileMaker web publishing, you need to make sure that you have your FileMaker database configured correctly. This is true for both local and remote databases. To configure your database, you will need to set up the correct access privileges.

Most of the time when you open a database you are asked for a user name and password. The access privilege that you will set up for the web will be similar to this.

Let's make sure your access privileges are set up properly.

First, open FileMaker and choose **File > Define > Accounts & Privileges** as shown below.

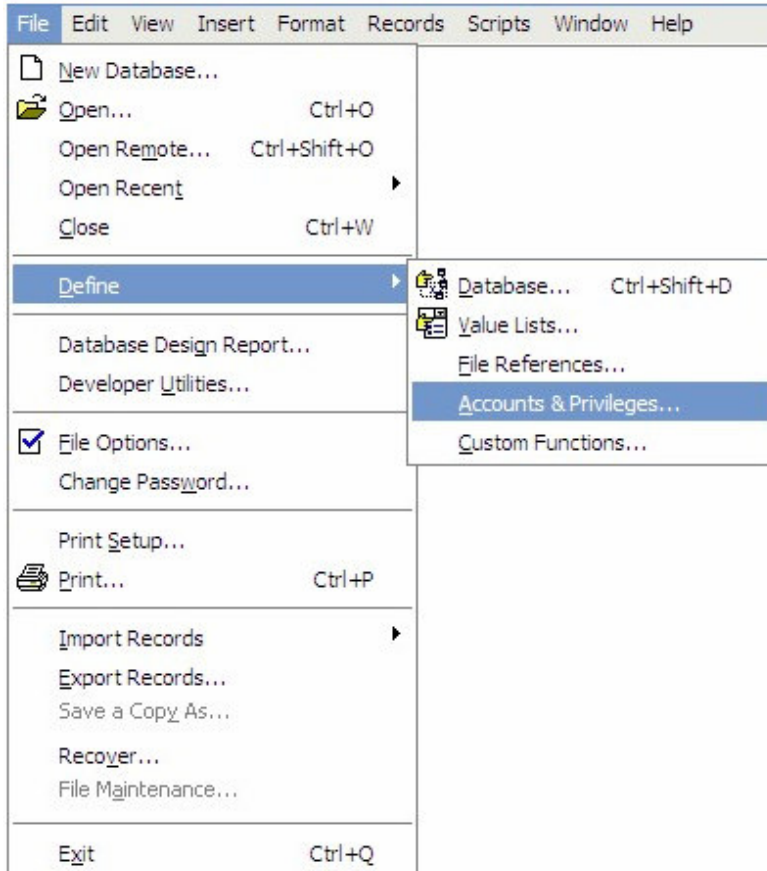


Image 2. Menu for Accounts and Privileges

This will open the Define Accounts and Privileges Window

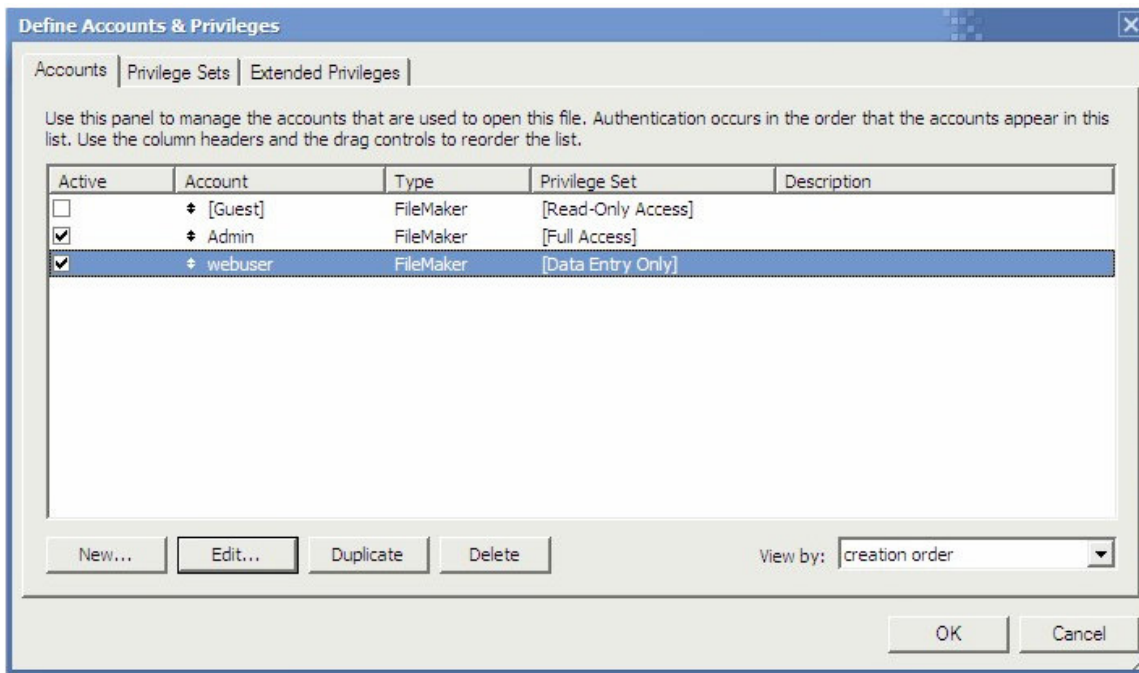


Image 3. Define Accounts and Privileges Window

I have already created a Web Account named “**webuser**” with “Data Entry Only” privilege rights assigned. You will need to create a Web Account as well. To do this, click on the “New” button.

The “Edit Account” window will open. Simply fill in the correct information. In this case I use “webuser” as the account name, and “webpass” as my password. I have set the Privilege set for “Data Entry Only”.

Once you have finished filling in the needed information, you can press OK. To modify the Privilege Set, you can simply press the “Edit” button for other options.

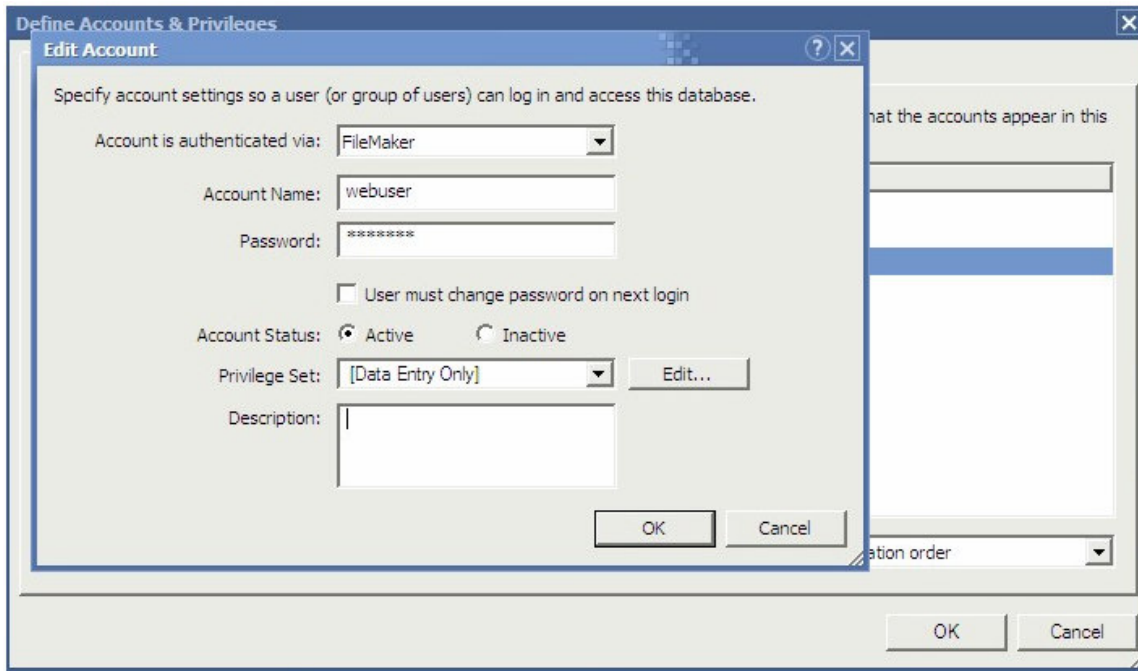


Image 4. Edit Account Window

## Extended Privileges

The Define Accounts and Privileges window has three tabs. In order to use PHP with FileMaker you will need to add two additional permissions.

“fmxml” for **FX.php** & “fmphp”

Note: Blackbelt currently uses the fmxml permission.

### Setting Up Extended Privileges

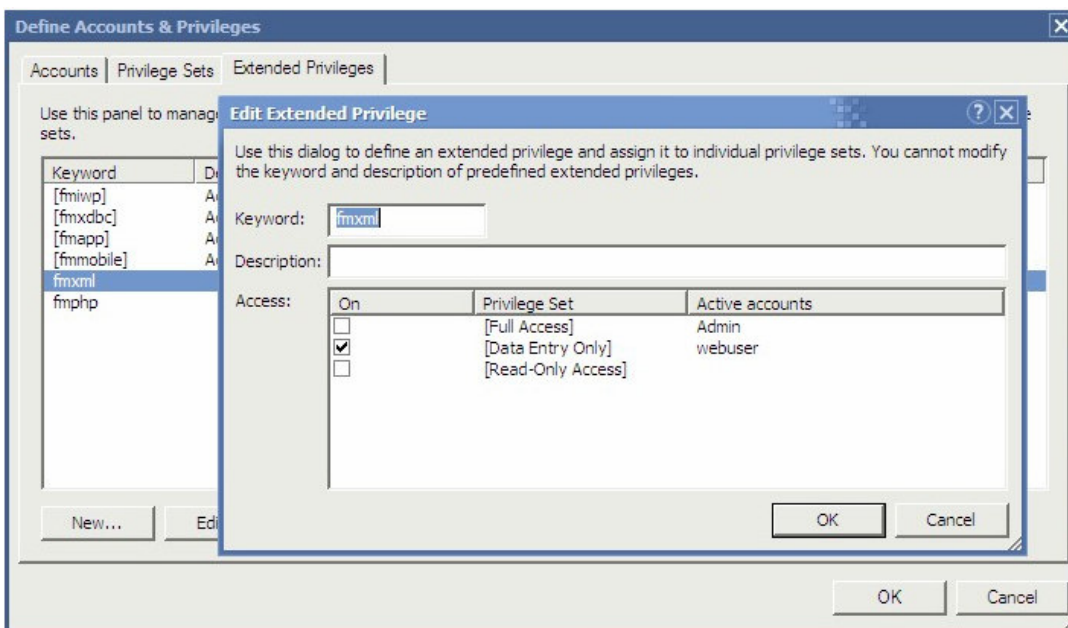


Image 5. Extended Privileges Window set up for fmxml

First, click on the “New” button. The Edit Extended Privileges window will open.

**In the Keyword field, type “fmxml” without the quotes. This will allow you to use FX.php with your solution.**

Select the same Privilege Set that you previously selected, and then click OK.

You have just configured FileMaker to work with FX.php. Your database is now ready to be hosted locally on your FileMaker Server Advanced Server, or at a FileMaker Hosting company.

## ***Extracting Blackbelt Files***

When initially setting up the Blackbelt files, we recommend isolating the installation into a sub-directory of your web server documents directory. The first step is to find out where the root directory of your web server is:

- On Windows IIS systems the default root directory is C:\inetput\wwwroot
- On Mac OSX the root directory is /Library/WebServer/Documents, or individual user directories at /Users/username/Sites/
- On hosting company servers, it is often either the root of your FTP directory or a public\_html directory within your root FTP directory

Extract your Blackbelt files out of the archive and copy the Blackbelt directory into your web server root directory.

### **Extracted Files Location: Windows / IIS**

In the most common setup, your Blackbelt files will initially be stored within the C:\inetpub\wwwroot\Blackbelt\_IIS\ directory.

### **Extracted Files Location: Mac OSX / Apache**

In the most common setup, your Blackbelt files will initially be stored within the /Library/WebServer/Documents/Blackbelt/ directory.

### **Extracted Files Location: Remotely Hosted**

In the most common setup, your Blackbelt files will initially be stored within the /public\_html/Blackbelt directory relative to your FTP connection. Verify this with your hosting company if needed or inquire on our forums.

## Setting Up Blackbelt: Windows IIS Users

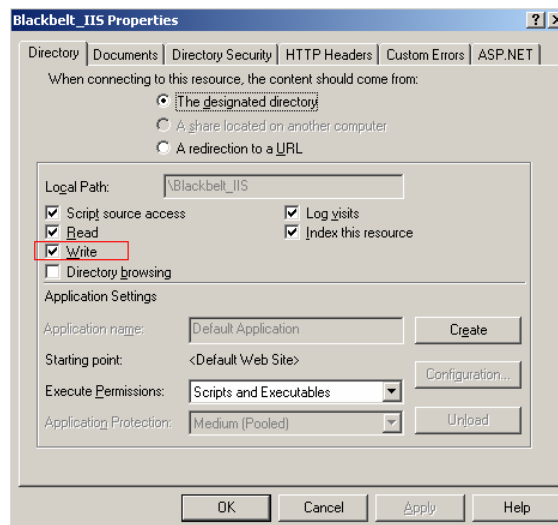
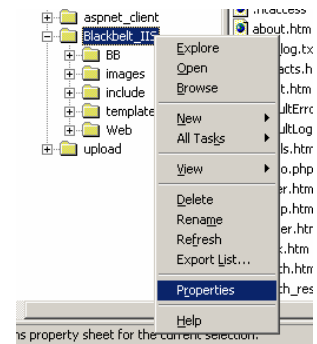
### Editing the Connection Settings:

Browse to the Blackbelt\_IIS/include directory and open the config.inc.php file with your text editor. Edit the following settings to suit your needs:

- `define('BLACKBELT_WPE', '127.0.0.1:80');`
  - This is the address of your web publishing engine, default is the localhost setting while a hosting company should be able to supply to you the correct address to use
- `define('BLACKBELT_USER', 'webuser');` / `define('BLACKBELT_PASS', 'webpass');`
  - Those two settings are the user name and password to use for connections to the database, this must match a web user setup in your database with the **fmxml** extended privilege
- `define('BLACKBELT_FORCE_LOGIN', FALSE);`
  - This setting should be left to its default value at first, once you are comfortable with Blackbelt you can set it to true and try out the new user login system
- `define('BLACKBELT_DEFAULT_LAYOUT', 'cgi');`
  - This is a setting for CDML sites that did not use the -Lay setting in their queries. FileMaker 7 and 8 work only with layouts and a layout must be specifically designed for your queries. This allows to set a layout name to use when the -Lay option is missing.

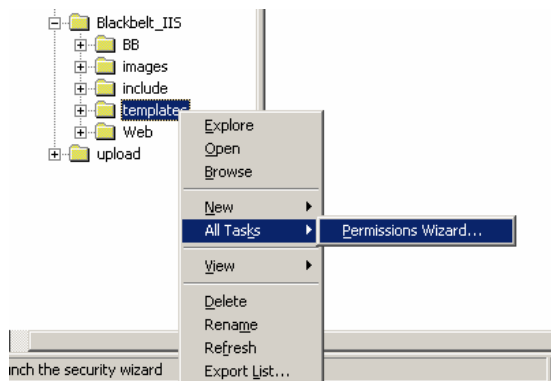
### Setting Correct Filesystem Permissions

Use the IIS console (accessed from Control Panel > Administrative Tools > Internet Information Services) to find the Blackbelt\_IIS directory. Then right click on the Blackbelt\_IIS directory, and select Properties. Then within the Properties dialog, check the Write checkbox.



Check the Write checkbox in the Properties Dialog

Next, exit the dialog by pressing OK and find the templates sub-directory within Blackbelt\_IIS. Right click on the templates directory and select All Tasks -> Permissions Wizard and accept all the default settings by pressing next numerous times.



Selecting the Permissions Wizard for the templates folder

### **Moving Static Pages to the Blackbelt Root Directory**

When using Blackbelt with IIS, your static files which are not used in CDML –format requests need to be copied to the root of the Blackbelt directory. To keep things simple for now, take all the files in the Web directory and copy them into the Blackbelt root directory. In the future this step can separate your format files from your static pages that will call the format files located in the Web directory.

### **Testing Blackbelt**

Blackbelt ships with a set of demo files, located within the Web directory which can be used for testing of Blackbelt functionality. Those demo files are designed to work with the Manager.fp7 sample database that can be found within the Database directory in the Blackbelt package.

Once all the installation steps above have been followed, point your browser to [http://127.0.0.1/Blackbelt\\_IIS/](http://127.0.0.1/Blackbelt_IIS/) and you should see the demo site.

If you get a an empty browser page or an error about the compile\_dir while attempting to browse the demo site, then most likely you did not follow the “Setting Filesystem Permissions” step properly. If you just get source code printed when calling FMPro.php then PHP might not be properly installed.

### **Using your Own Format Files**

Once the Blackbelt demo files are working, you can replace the files within the Web directory with your own CDML format files. We suggest to leave the defaultError.htm and defaultLogin.htm files in place and edit them as needed.

## Setting Up Blackbelt: Mac Apache Users

### First we need to make finder display hidden files:

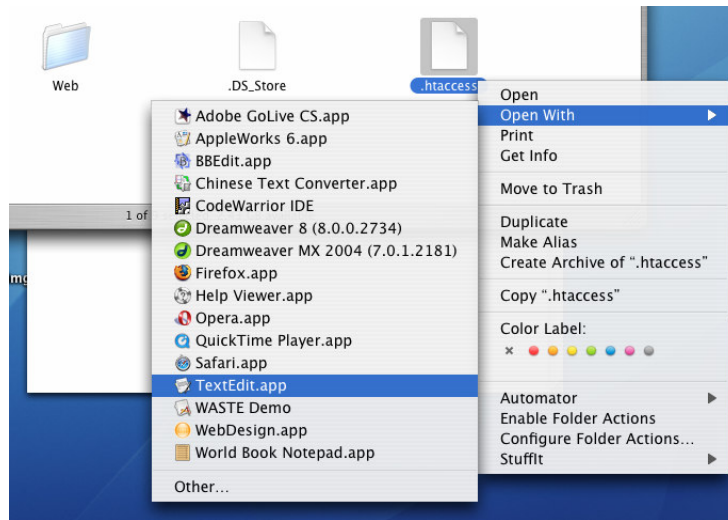
In the Terminal type:

```
defaults write com.apple.finder AppleShowAllFiles TRUE
killall Finder
```

**Quick Note:** after you are done, you can execute the command again with FALSE as the setting to hide the hidden files.

### Editing .htaccess Settings:

Browse to the Blackbelt directory and open the .htaccess file with a text editor (if you cannot see the .htaccess file, then you have not followed the steps to make finder display hidden files correctly).



Right clicking on the .htaccess and opening it with a text editor

Once the .htaccess file is open in your text editor, find the “RewriteBase /” line and change it to match the location of your Blackbelt directory relative to your Apache documents directory. This will usually be “/Blackbelt/” if the Blackbelt directory is within your /Library/WebServer/Documents/ folder, or “/~username/Blackbelt/” (replacing username with your own username) if you are using Personal Web Sharing and placed the Blackbelt directory into your Sites directory.

### Editing the Connection Settings:

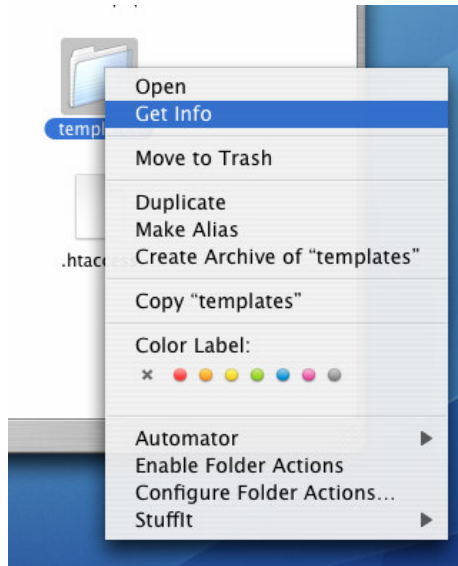
Browse to the Blackbelt/include directory and open the config.inc.php file with your text editor. Edit the following settings to suit your needs:

- `define('BLACKBELT_WPE', '127.0.0.1:80');`
  - This is the address of your web publishing engine, default is the localhost while a hosting company should be able to supply to you the correct address to use
- `define('BLACKBELT_USER', 'webuser');` / `define('BLACKBELT_PASS', 'webpass');`
  - Those two settings are the user name and password to use for connections to the database, this must match a web user setup in your database with the **fmxml** extended privilege
- `define('BLACKBELT_FORCE_LOGIN', FALSE);`
  - This setting should be left to its default value at first, once you are comfortable with Blackbelt you can set it to true and try out the new user login system
- `define('BLACKBELT_DEFAULT_LAYOUT', 'cgi');`
  - This is a setting for CDML sites that did not use the -Lay setting in their queries. FileMaker 7 and 8 work only with layouts and a layout must be specifically designed for your queries. This allows to set a

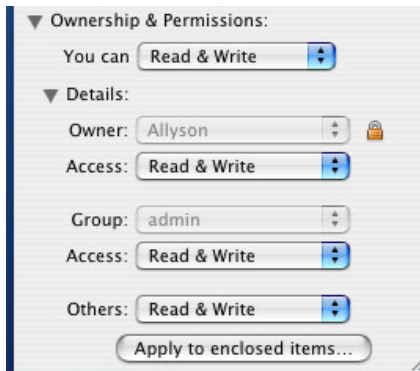
layout name to use when the -Lay option is missing.

### Setting Correct Filesystem Permissions

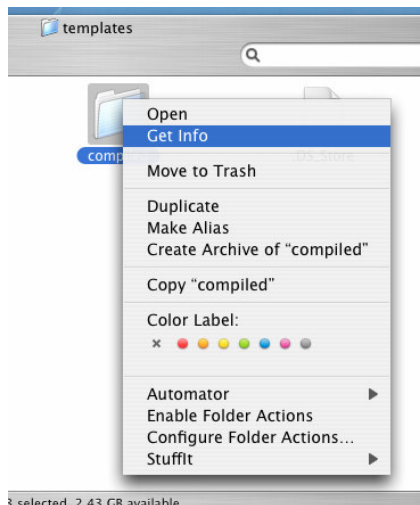
Use Finder to browse to the Blackbelt directory in your web server directory. Open the "Get Info" dialog for the templates directory and set **all** the permissions to read and write, then open the templates directory and do the same for the compiled directory permissions.



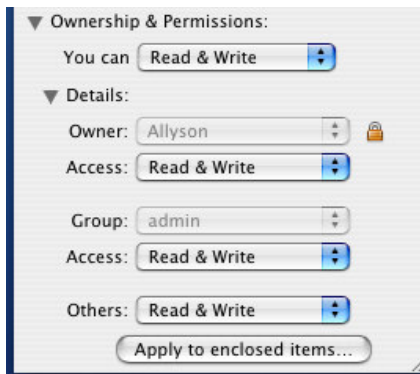
Using the Get Info command on the templates directory



Permission settings in the Get Info dialog for the templates directory



Opening the templates folder and getting information on the compiled directory



Permission settings in the Get Info dialog for the compiled directory

### **Testing Blackbelt**

Blackbelt ships with a set of demo files, located within the Web directory which can be used for testing of Blackbelt functionality. Those demo files are designed to work with the Manager.fp7 sample database that can be found within the Database directory in the Blackbelt package.

Once all the installation steps above have been followed, point your browser either to <http://127.0.0.1/Blackbelt/> if you are using the /Library/WebServer/Documents/ or <http://127.0.0.1/~username/Blackbelt/> if you are using your Sites directory and you should see the demo site on your screen.

If you get a list of files, make sure your Apache httpd.conf settings have the AllowOverride option set to All, while an internal server error suggests a problem with the .htaccess syntax.

### **Using your Own Format Files**

Once the Blackbelt demo files are working, you can replace the files within the Web directory with your own CDML format files. We suggest to leave the defaultError.htm and defaultLogin.htm files in place and edit them as needed.

## ***Upgrading Current CDML Solutions to FileMaker 7/8***

### **Combining Multiple Databases into a Single Database with Multiple Tables**

The biggest change in FileMaker 7/8 is the ability to store multiple tables within a single database file. Therefore the first step to convert your database solution is to combine all the different CDML database files into a single database with multiple tables. The data relationships then need to be adjusted to use the tables instead of related files. Layouts can then be copied into this single database file.

### **Creating Web Layouts**

We recommend creating a special set of layouts that will be used on the web. These layouts should include all the fields that you will be accessing from the web. Any value lists that you plan to use on the web must be tied to their respective fields on these layouts.

### **Changing CDML Files to Reference the New Database**

Since now you will have a single database with multiple layouts, you need to change your CDML source code to reference the same database in all the “-db” parameters and add the appropriate “-lay” parameters for the web layouts.

### **Changing CDML Files to Reference FMPro.php: IIS / Apache without mod\_rewrite only**

If you do not have mod\_rewrite enabled or .htaccess restricted, then you need to first change all the “FMPro” and “FMPro?” references in your current CDML files to “FMPro.php” and “FMPro.php?”. Then any static pages that are not used as part of the -format attributes need to be copied into the root Blackbelt directory from within the Web directory. Any files that are only used in the -format or -error attributes can stay within the Web directory.

## ***Changes in the Blackbelt CDML Engine***

Changes to some CDML tags and technical details of the implementation can be found within the Blackbelt Technical Notes document at:

[http://fmwebschool.com/resources/products/blackbelt/BB\\_TechNotes.pdf](http://fmwebschool.com/resources/products/blackbelt/BB_TechNotes.pdf)

## ***Special Notes and License Agreements***

### **FileMaker Inc. Support for CDML**

FileMaker Inc. will not provide support for CDML written and ran on the Blackbelt engine. Any CDML coding questions or installation support should be directed to the FMWebschool forum (<http://fmwebschool.com/frm/>).

### **FX.php**

This engine uses the open source FX.php engine created by Chris Hansen of iviking.org – the source code, documentation, and license agreements are included in the BB/lib/FX/ directory within your Blackbelt installation directory.

### **Smarty - the compiling PHP template engine**

Smarty is licensed under the LGPL License Agreement which can be found in the BB/lib/Smarty-2.6.16 directory within your Blackbelt installation directory. In compliance with the LGPL terms the Smarty source code is available in its unaltered state in the BB/lib/Smarty-2.6.16 directory and can be freely modified and replaced by any Blackbelt user. If you desire to integrate a newer version of the Smarty library into Blackbelt, then simply replace the contents of the Smarty-2.6.16 folder or change the path to Smarty in the BB/lib/config.inc.php file

### **Copyright Notices**

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### **FileMaker Hosting Companies**

Point In Space <http://www.pointinspace.com> Contact John May for specials concerning FileMaker hosting and BlackBelt.