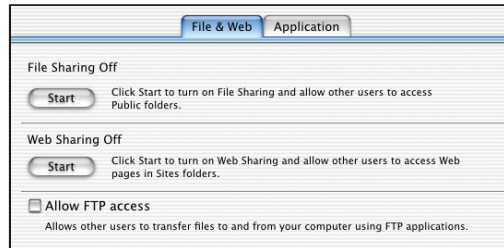# SETTING UP PHP

You have completed the Flash MX file and have covered all the ActionScript that makes it tick, but before you can really test this project, you need to make sure you have your PHP and MySQL code set up properly.

These topics are covered in this section, assuming you are running and developing witha Flash MX on OS X. For information on getting Apache or another web server running with PHP and MySQL for other platforms, see the list of links at **www.impossibilities.com/mxmagic/**.

For those of you with OS X, let's start with PHP first. Mac OS X comes with a version of PHP4 installed by default.

If you are using OS X, to start your Apache web server, do the following:

1 Open the System Preferences.

2 Press the Start button under Web Sharing.

3 Apache should be ready to go. In your browser, try going to the address **http://localhost/ ~myusername**/, where **myusername** is your currently logged-in OS X short username.

4 The location from which files are pulled is your **sites** folder under the root of your user folder. Typically this path is Macintosh HD/Users/yourusername/ sites/. Place your .php and .html files to be served in this location.

The Mac OS X File and Web Sharing control panel.

PHP Note: For this project you'll need to use at least version 4.x of PHP. However, just before this book went to press, there was an important discovery made in regards to a bug in almost all versions of PHP (3.x to 4.x). If you plan on deploying or already have a site based on PHP, please visit **www.php.net** to read about important information for upgrading or patching your installation of PHP to version 4.1.2 or higher so that you will not be susceptible to the security vulnerability that the bug causes. Also, if using Mac OS X, continue to check with Apple via the Software Update mechanism as they may release a security patch or upgrade that will also handle this issue for you without requiring you to manually recompile or patch PHP.

One thing you might need to do if you are not using the very latest update to Mac OS X (10.1.2 as of this writing) is enable PHP. Versions prior to 10.1 came with PHP installed but were not always enabled properly, especially if you have never updated OS X past the initial release. So unless you've updated to 10.1.2, you might need to do the following to get PHP to work on your machine:

1 Launch the terminal application.

2 Issue the following commands:

```
[ localhost:~] rhall% su
Password:
[ localhost:/Users/rhall] root# cd
➥/etc/httpd/
[ localhost:/etc/httpd] root#
```

su is the substitute user command, and it will allow you to make changes as the root user. You will need to provide your current user password at the password prompt. Note that all occurrences of rhall in the prompts will be replaced by your username on your system.

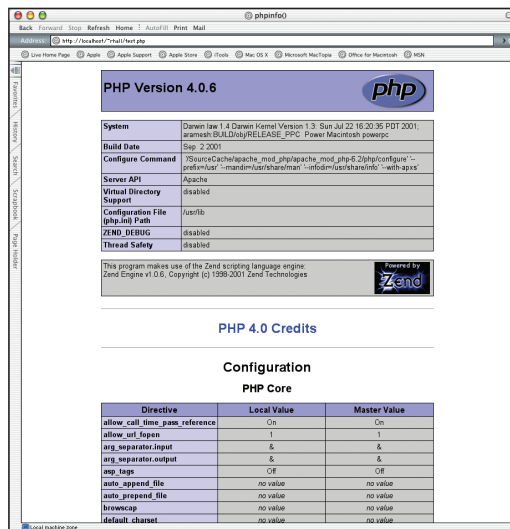**3** Issue the next command:

```
pico httpd.conf
```

4 Press Ctrl+W and do a search for "php". Keep searching until you find two lines that look like this:

```
#AddType application/x-httpd-php .php
#AddType application/x-httpd-php-source
➥.phps
```

5 Remove the # at the beginning of each line to uncomment these Apache directives.

These two lines tell Apache what to do with files that end in .php and .phps.

6 After you have removed them, press Ctrl+X to save the file and exit.

7 Now you will need to stop and start Apache for PHP files to be recognized. Do this from the System Preferences>Web Sharing panel previously mentioned.

8 Next create in your **sites** folder a text file named **test.php**.

9 In this file, place the following single line of code:

```
<? phpinfo(); ?>
```

10 Launch a web browser and try accessing the file from the following URL, where **myusername** is your logged-in short username: **http://localhost/ ˜myusername/test.php**. You should see a page similar to this figure.

If that doesn't work or if those two lines were already uncommented and the preceding test file doesn't work, there might be an issue with your current installation.

The first step in troubleshooting would be to try running the automatic Software Update Control Panel found in the OS X System Preferences. Running this will enable your machine to update itself to the latest version of OS X.

If that fails, you might need to contact your local OS X guru. If it's lunchtime, pay him or her a visit and bring a pizza and beer with you. This should properly prepare the guru for providing the assistance you need.

Note: As an alternative, there is also an excellent resource available at **www.stepwise.com/Articles/ Workbench/2001-10-11.01.html**. This article covers the installation of the latest versions of Apache and PHP directly from the source files available from their respective web sites at **www.apache.org** and **www.php.net**.

This can be of some use if you have specific needs for your installation of PHP and Apache under OS X. A quick search of **www.google.com** for PHP and OS X will give you a few leads to explore as well.

Example of a phpinfo(); command output.

INSTALLING MYSQL FOR OS X

Now you need to get MySQL installed. You can visit **www.mysql.com** to download the latest installers, documentation, and instructions for just about any platform. In the case of running under OS X, there are already some premade OS X–specific installers available directly from the Apple web site. As of the writing of this project, the URL is **www.apple.com/downloads/macosx/development_tools/mysqlinstallerpackage.html**.

You can also go to **www.apple.com/downloads/macosx/** and do a search for MySQL. You will see several different installers and tools that can be used to get you going.

You should download and install MySQL according to the instructions with the version you download. Ideally, whatever you download you should make sure you get at least version 3.23 of MySQL.

Make sure during the MySQL installation process that you remember the root password that you assign MySQL. This will be important for you to be able to log in and make changes or additions to your MySQL databases.

After you have MySQL installed and running, there is a step you can take if you are not a MySQL guru. This step will install software that will make it easy to install, set up, and maintain your userpoll database schema and tables. That software is phpMyAdmin and is available from **http://phpmyadmin.sourceforge.net/**.

This is a web-based GUI for administrating and manipulating MySQL. If you are already a MySQL guru and prefer to control MySQL from a command line, feel free to skip this. The phpMyAdmin package is a set of PHP files that you simply drop into a subdirectory in your **sites** folder, you configure a few files, and then you can use it to install your schema. Consult the documentation that comes with phpMyAdmin for its installation and configuration. One tip: If you do install and use phpMyAdmin, make sure you read about and set the security methods properly. The latest version supports a method to authenticate a user first and maintain state using cookies. This is the preferred method of security. It would also be wise to use Apache's built-in methods of `.htaccess` files or secured realms to further restrict access to this area on your server from the outside world. You can also configure Apache to serve this directory up only to a web browser running locally on the machine (that is, localhost or 127.0.0.1).

After you have Apache, PHP, MySQL, and phpMyAdmin up and running, do the following:

1 Log in to phpMyAdmin and create a new database named **user_poll**.

2 Select that newly created database.

3 Import the **user_poll.sql** file from the accompanying CD-ROM. This file contains the schema and sample data for your database. (There is another file named **user_poll_with_comments.sql** that has a little more information about the tables for your reading pleasure.)

After the file has been imported, your database structure and schema (including sample data) is in place and ready to go.

The final step is to create a user and password with permissions to access this database. The users section of the phpMyAdmin GUI enables you to do this very quickly. You will need to give the user permission to access the userpoll database you just imported and the capability to select, update, insert, delete, and so on from the userpoll database.

After you have done that (and restarted MySQL using the phpMyAdmin tool or from the command line using the mysqladmin tool in or to reset and flush the user privileges for the user changes to take effect), you should copy all the .php files from this project's folder on the accompanying CD-ROM to your **sites** folder under the root of your user folder. Do not copy the .php files from the **testmode** directoy. Those are dummy versions for testing the project without PHP and MySQL.
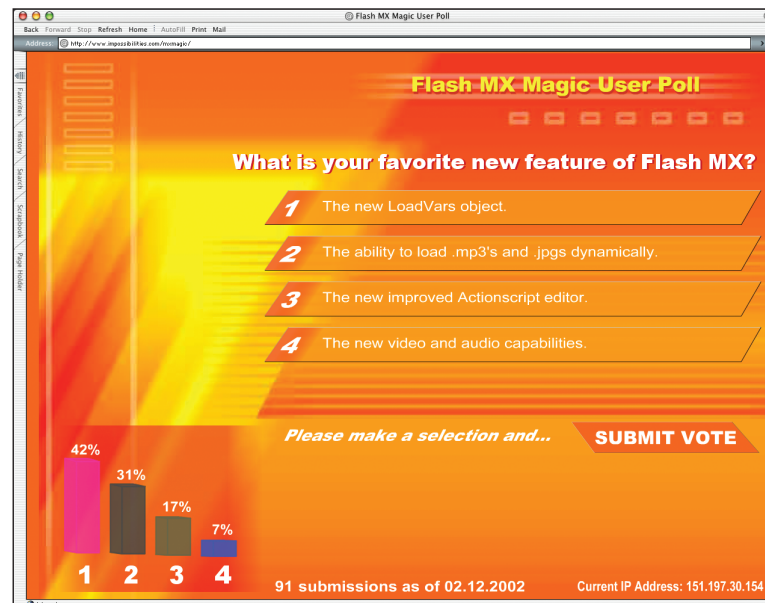
To better understand the .php files, open them with a text editor and review the comments contained within.

You then need to use a text editor to edit the **dbconnect.php** file to reflect the username, password, and database name that you just created in MySQL using phpMyAdmin.

After these files are in place and the **dbconnect.php** file has been edited, drop in your published .swf file and the corresponding .html file. Then try loading it up in your browser to see if it works.

Hopefully, you will see a screen similar to this. If you do, you are all set. If not, go back through the steps to make sure you haven't skipped anything.

A working version of the project at its home URL: **www.impossibilities.com/mxmagic/**.

If you were successful, you should consider the following:

- Customize the look and feel of the assets in this project to incorporate it into your own web site.

- Refine the entire project into a new Flash MX component to drop into any other Flash project you want.

- Add more robust error handling in the functions that handle the `loadVars` objects to display error messages about problems connecting to MySQL and PHP. Adding a third frame named **errors** to which the movie is directed when any of the `loadVars` objects contain an item named `errorMessage` would be a good start.

- Change the layout or have the bar chart only appear after a user has voted.

- One area you should definitely consider exploring is creating an administration interface in Flash MX so that you will not have to manually edit the MySQL database or use phpMyAdmin to make changes and add polls, responses, bar colors, and so on.

To do that, you will need to know a little about the structure of the database.

In the polls table, there are five fields:

> poll_id
>
> active
>
> dt_stamp
>
> pollname
>
> total_qs

This is the first section of the database you will need to edit to start a new poll.

To add an additional poll to the default one included in the **user_poll.sql** file, insert a new row into the MySQL database. The poll_id will automatically be incremented by 1. You should explicitly set active to null or N until you have completed all the new data inserts and deactivated the old active poll.

For the dt_stamp, you can use the current date and time. The pollname should be the poll question you want displayed, and the total_qs field should be the number of responses you would like for this specific poll. This number starts with 1 and goes up.

After you have inserted a new row in this table, you will need to add the corresponding responses into the questions table.

In the questions table for the question_id field, make this value the same as what was assigned to your poll in the poll_id field of the polls table. The question field should be a response to the poll question, the active field should be null or N until you are ready to make the poll active, and total_submits should be 0 initially because this is where the amount of votes for each response is stored. The item_id field should contain an integer that identifies the response. You should start with 1 for the first response and increase by 1 for each additional response you add. The barcolor field is the hex value of the color tint you would like applied to the corresponding bar in the bar chart you generate. You can have as many responses as you'd like, but the screen real estate of your stage is the limiting factor here. You might have to tweak your layout if you have more then six to seven responses.

After you have inserted a new row for your new poll in the polls table and the corresponding responses in the questions table, you should set the active flag to null or N for each older poll in the polls table and all the older responses in the questions table. Then you should make all your new items active by placing a Y in the active fields. Now your new poll is ready to go.

The IP tracking table simply tracks the IP addresses of users who have voted, the poll they voted on, and the time and date they voted. This table is self-maintaining and automatically purges older IP addresses as new ones are inserted. If on an IP insert it finds IP addresses that are older than the current date, they are automatically removed.

These are the basics of this database. Feel free to improve and optimize it.