Software Installation Manual

LEMA Course Scheduling System

Team 12

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Version History

Date	Author	Version	Changes made	Rationale
04/09/12	DW	1.2	Initial submission o Note: section 2.1.1 follows a web tutorial and needs to be updated to discuss deployment to DreamHost. o Also needs further installation instructions for installing bundles to the symphony instance.	Draft TRR

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1. Introduction

1.1 System Overview

The LEMA Course Scheduling System is the combination of both the LEMA website and FET system. The website acts as a public interface on the web for students to register for courses, counselors to review those selections, teachers to see their final schedules, and schedulers to input information needed to manage the creation and organization of course schedules for the coming semester. The FET is a desktop system used to organize the courses into a final schedule that follows given constraints in an automated fashion. Instructions in usage for both are included in this user manual.

This Installation Manual is meant for the system admin charged with deployment of the system to a host server.

1.2 System Requirements

1.2.1 Hardware Requirements

The system is deployed to the client's choice of hosts (Dream Host).
DreamHost's website URL is: http://dreamhost.com/

The client currently has an existing account that we'll be deploying the LEMA Scheduling system to.
Current hard ware specs are follows:

- Processor: Intel Xeon 3.00 GHz
- RAM: 8 GB
- Hard Disk: 50 GB
- Network Connection: Ethernet

1.2.2 Software Requirements

- Required Operating System: Linux/Windows
- Programming Languages: PHP - http://www.php.net/
- DB: MySql - http://www.mysql.com/
- Web Platform: Symfony - http://symfony.com/

2. Installation Procedures

2.1 Initialization procedures

2.1.1 Setup Symfony web platform on your host server

Note: this tutorial assumes you have PHP and Apache running on your target host.

2.1.1.1 Download and Extract

1. Download the framework from the Symfony website. Here's a link. At time of writing, this manual works with the **Symfony Standard 2.0.9** package.
2. Either download the package directly to your */var/www* directory or move it there yourself.

You'll now have a directory labeled `Symfony` in your `/var/www` directory.

2.1.1.2 Prepare

1. Now navigate to http://localhost/Symfony/web/config.php.

Note: Symfony requires that the config script is only run through **localhost**. If you are remoting into the server through SSH, this poses a bit of a problem. I ended up redirecting port 80 on my server to port 1337 on my local machine with Putty. Here's how to do it.

2. You may get all kind of requirements and warnings when you first get to `config.php`. Below is a list of the major hoops to jump through to get Symfony to finally install.

    - Install and enable the **SQLite** or **PDO_SQLite** extension. Just run these two commands. It doesn't matter what directory you're in.

```
apt-get install php5-sqlite
```

```
sudo apache2ctl restart
```

- Change the permissions of the `app/cache/` directory so that the web server can write into it.

```
sudo chmod -R 777 /var/www/Symfony/app/cache
```

- Change the permissions of the `app/logs/` directory so that the web server can write into it.

```
sudo chmod -R 777 /var/www/Symfony/app/logs
```

- Set the `date.timezone` setting in `php.ini`.

```
sudo vim /etc/php5/apache2/php.ini
```

- Find the line with `;date.timezone =` under the `[Date]` section, and set it to your timezone based on PHP's list of timezones. Also, make sure to remove the semicolon at the beginning of the line!

```
sudo service apache2 restart
```

- Install and enable a **PHP accelerator** like APC (highly recommended).

```
sudo apt-get install php-apc
sudo apache2ctl restart
```

- Install and enable the `intl` extension.

```
sudo apt-get install php5-intl
sudo apache2ctl restart
```

- Set `short_open_tag` to `off` in `php.ini`.

```
sudo vim /etc/php5/apache2/php.ini
```

- Find the line with `short_open_tag = On` and change it to `short_open_tag = Off`

2.1.1.3 Configure

1. At the end of the configuration script, it will try to write to `/var/www/Symfony/app/config/parameters.ini`, so make sure it's write enabled with the following command.

```
sudo chmod 777 /var/www/Symfony/app/config/parameters.ini
```

2. Now that you've got everything set up properly, we can actually configure Symfony! If you haven't already, go to http://localhost/Symfony/web/config.php(screenshot)
3. You'll first be asked to provide database information. I did MySQL because it's what I'm comfortable with. (screenshot)
4. Then you'll be asked to set up a hash for CRSF protection. (screenshot)
5. It will then try to write all the configuration information to your parameters.ini file. It should succeed. If not, check you didn't miss any parts of step 1. (screenshot)
6. Otherwise, you can just copy the configuration information over manually.

2.2 Re-installation

<< Describe procedures for reinstalling the system (e.g., to recover from a corrupt installation). >>

2.3 De-installation

<< Describe procedures for removing the system. >>

3. Troubleshooting

3.1 Frequently Asked questions

<< List Frequently Asked Questions by operators, and answers to those questions.>>

3.2 Error Codes and Messages

<< List and identify all error codes and messages generated by the software, the meaning of each message, and the action to be taken when each message appears.>>

3.3 Note

<< Include any general information that aids in the understanding of the document. All acronyms, abbreviations, and their meaning as used in this document should be listed.>>

4. References

- Symfony 2.0 Installation Tutorial - http://www.joelverhagen.com/blog/2011/05/how-to-configure-symfony-2-0-on-ubuntu-server-2011-4/
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