

Open eClass 2.3 - Asynchronous eLearning Platform

Installation Instructions

Authors: Tsibanis Constantinos, Exidaridis Yannis

Athens, March 29th 2010

1. INTRODUCTION

The Open eClass platform is a complete Course Management System. It is the solution offered by the Greek Academic Network GUnet to support Asynchronous eLearning Services. It is mainly designed, developed and supported by the GUnet Asynchronous eLearning Group and is distributed for free as open-source software.



The current version of the Open eClass 2.3 platform is tested and operates well in:

- Ms Windows environment (**Windows 2000, Windows 2003, XP, Vista, 7**)
- Various Linux distributions (**RedHat, Debian, Ubuntu, Suse, CentOS** etc)
- UNIX environment (**Solaris**).

In the following pages platform's installation instructions are presented analytically:

- Actions before installation – Prerequisites
- Installation in Unix / Linux operational systems (Solaris/Redhat, Debian, etc)
- Installation in Ms Windows systems (Win2000, Win XP, Win2003, Vista, 7 etc)
- Actions after installation – Further settings

2. Actions before Installation – Prerequisites

A series of applications needs to exist and operate in order for the Open eClass platform to be installed and operate as well. These applications are:

A. Web Server ([Apache 1.3.x or 2.x](#))

Apache has to be able to control pages of the *.php3 .php4 .php .inc* type. If you have not set the server yet, adding the following line to the `httpd.conf` file is enough:

```
AddType application/x-httpd-php .php3 .php4 .php .inc
```

You will also have to define that the default charset of pages sent by the Web Server is *UTF-8*. In Apache, this can be done by placing the following statement in the `httpd.conf` file:

```
AddDefaultCharset UTF-8
```

If you use apache 1.3.x, deactivate directory indexing for safety and security. Add the *-Indexes* option on the `httpd.conf` to the list of Options. If eClass is installed on `/var/www/`, add `httpd.conf` to the following statement:

```
<Directory /var/www/>
.....
Options -Indexes
.....
</Directory>
```

For Ms Windows Only. If Microsoft Webserver (IIS) runs on your computer, you will have to deactivate it. Follow *Start->Programs->Administrative Tools->Services* and click on "stop" in order to stop the «*World Wide Web Publishing Service*». Click right on the service and click on "Disabled" from the "Startup type" options to disable *IIS permanently*. Please notice that platform Open eClass operates without any problems under IIS web server, but without being exhaustive tested.



B. Scripting Language [PHP](#) (versions $\geq 4.3.0$)

The platform operates without any problems with $\geq 4.3.0$ and $5.x$ versions.

During PHP installation, it is important to activate the Apache support for PHP. Note that you will need to activate support for *mysql*, *zlib*, *pcre* and *gd* modules in PHP. If you wish to use an LDAP server to authenticate users, you have to activate the module for the *ldap* support as well. Most of the PHP distributions have built-in support for these modules (except, maybe, for the *ldap* module). Satisfaction of all the above is checked during the Open eClass installation.

You will also have to define the following parameters on the `php.ini` file:

```
register_globals = on
short_open_tag = on
magic_quotes_gpc = on
```

As far as the maximum file size allowed to be uploaded on the platform is concerned, you can adjust it to the following lines in the `php.ini` file:

```
upload_max_filesize = 20M (predefined value is 2M)
memory_limit = 25M (predefined value is 8M)
post_max_size = 25M (predefined value is 8M)
max_execution_time = 100 (predefined value is 30 sec)
```

What is more, if a PHP note comes up during the application, search for the `error_reporting` variable in the `php.ini` file and define the following value:

```
error_reporting = E_ALL & ~E_NOTICE
```

For Windows Only

- In Windows extensions uncomment (;) from the line `extension = php_ldap.dll`
- Change the `session.save_path` variable to an existing path (e.g. `session.save_path=c:\winnt\temp\`). Also make sure that the apache has access rights on it.
- Fill in the SMTP server that serves you for an email mission, e.g. `SMTP = mail.gunet.gr`

Finally, you are advised to define the default charset again by the following line:
`default_charset = "UTF-8"`

As soon as you have finished with changes, restart Apache Web Server.



C. Database [MySQL](#) (versions 4.1.x or 5.x)

Along with the MySQL installation, a user account with database creation rights has to be created.

You should also be sure that MySQL is not running on a strict mode. For that reason, you should check if the

```
--sql-mode
```

parameter that exists in the *my.cnf* or *my.ini* configuration file for UNIX and Windows users correspondingly, has a value or not. If it does (e.g. `--sql-mode=STRICT_TRANS_TABLES` or `--sql-mode=STRICT_ALL_TABLES`), then turn it into a blank one (`--sql-mode=""`).

D. Mail Servers [sendmail](#) or [postfix](#) (optional)

In some platform's operations (e.g. during users' registration), emails are sent. If any of the email mission applications does not function, platform mails are not sent anywhere.

For Windows Only: Alternatively, in order to install the above, use the [EasyPHP](#) package or the [XAMPP](#) package.

3. Installation in Unix / Linux (Solaris/Redhat, Debian, Suse, Ubuntu Etc)

A. Installation Process

You can decompress the **openeclass-2.3.tar.gz** file using the `tar xzvf eclass.tar.gz` command. The sub-directory created during decompression of the packet includes all the application files. This sub-directory has to be placed in an accessible point by the computer web server.

To give access rights to web server you can type the following commands (if the web server runs as a `www-data` user)

```
cd (eclass path) (e.g. cd /opt/eclass)
chown -R www-data *
find ./ -type f -exec chmod 664 {} \;
find ./ -type d -exec chmod 775 {} \;
```

Administrator's rights (root) are usually necessary for the above commands.

In order to start installing, visit the `/install/` sub-directory address with a web browser. If, for example, the main eclass directory is located in `http://www.example.gr/eclass/`,



the address you have to type is <http://www.example.gr/eclass/install/>. Then follow the platform installation guide steps like the ones presented on your screen. Note that during the installation process you will be required the following:

- The name of the computer MySQL is installed to (e.g. eclass.gunet.gr, localhost – if they are on the same computer)
- A “username” and a “password” for MySQL with database creation rights.
- Name for the main eClass database (default is eclass). Change it however if there is a database with the same name already.
- Platform URL (as this appears on the browser after installation e.g.<http://eclass.gunet.gr/eclass/>).
- The file path on the server. Make sure that the path is right (e.g. /var/www/html/).
- Administrator’s Name / Surname and email.
- Administrator’s Username and Password.
- The name you would like to give to the platform (e.g. Open eClass).
- Phone number and email helpdesk (several applications meet this email, it could be the same as the administrator’s).
- Name and address of your institute.
- The ldap server of the institute user authentication will be taking place (ldap.noc.uoa.gr), as well as the ldap server basedn (e.g. ou=people,o=UoA,c=gr). It should be noted, that the computer eclass will be installed to, needs to have access to the ldap server of the institute. In case there is no LDAP server available in your institute or organisation, leave it blank. There is an alternative way of authenticate users through MySQL.

4. Installation in Ms Windows (Win2000, Winxp, Win2003)

A. Installation Process

Decompress the openeclass-2.3.zip file in the root directory of the Apache. The subdirectory created during the decompression of the package includes all files of the application. This sub-directory has to be placed in an accessible path by the web server.

In order to start installation, visit the /install/ sub-directory address with a web browser. If, for example, the main eclass directory is located in <http://www.example.gr/eclass/>, the address you have to type is <http://www.example.gr/eclass/install/>. Then follow the platform installation guide steps like the ones presented on your screen. Note that during the installation process you will be required the following:



- The name of the computer MySQL is installed to (e.g. eclass.gunet.gr, localhost – if they are on the same computer)
- A “username” and a “password” for MySQL with database creation rights.
- Name for the main eClass database (default is eclass). Change it however if there is a database with the same name already.
- Platform URL (as this appears on the browser after installation e.g.http://eclass.gunet.gr/eclass/).
- The file path on the server. Make sure that the path is right (e.g. C:\Program Files\Apache\htdocs\).
- Administrator’s Name / Surname and email.
- Administrator’s Username and Password.
- The name you would like to give to the platform (e.g. Open eClass).
- Phone number and email helpdesk (several applications meet this email, it could be the same as the administrator’s).
- Name and address of your institute.
- The ldap server of the institute user authentication will be taking place (ldap.noc.uoa.gr), as well as the ldap server basedn (e.g. ou=people,o=UoA,c=gr). It should be noted, that the computer eclass will be installed to, needs to have access to the ldap server of the institute. In case there is no LDAP server available in your institute or organisation, leave it blank. There is an alternative way of authenticate users through MySQL.

5. Actions after Installation – Further Settings

- The platform is using the phpMyAdmin management tool. For safety and security reasons, access to phpMyAdmin is done through the browser’s cookies. If you want to change it, you can refer to the *config.inc.php* file of phpMyAdmin.
- eClass introduces 3 tentative / general Schools / Faculties. (Faculty 1-Code TMA, Faculty 2-Code TMB etc).You will have to change and adjust them to the Schools-Faculties of your own institute. You can do this through the administrator tool. You will find more and further information for these actions in the Administrator’s manual (included in the administator tool).
- In case some institutes intend to substitute the initial eClass logo with one of its own, they just have to substitute the following picture with their own.

(path_eClass)/template/classic/img/logo_bg_50.gif

You can use the “OpeneClass_plain_logo.gif”

- In the *config.php* file, the *close_user_registration* variable, which is FALSE by definition, will be defined. Changing the value to TRUE, registration of users with



"student" rights will not be free anymore. Users will have to follow a process similar to the teacher account creation process, namely filling in a student account application form, in order to obtain a platform account. The application will be examined by the administrator who either approves of it and opens an account, or rejects it.

- In the *config.php* the variable *have_latex*, which is *FALSE* by definition is defined. If you change its value to *TRUE*, mathematic symbols will be supported only in some eClass subsystems. However, this presupposes the existence of a latex system on the host computer where eClass has installed. For more about the configurations you will need to do, please refer to *README_latex.txt*. If you do not want to have a latex support, leave it as it is (that is in *FALSE* value).
- You can add a text (e.g. informative) on the left and right of the platform homepage. For that reason, keystroke the text you prefer (in HTML form) on the *eclass_home_extras_left.html* and *eclass_home_extras_right.html* scripts correspondingly, which can be found on eClass parent directory.
- You can modify the names of the basic roles of the users of the platform by modifying the message file
(eClass_path)/modules/lang/greek/common.inc.php
(eClass_path)/modules/lang/english/common.inc.php
- More information for all these actions can be found in the Administrator's manual (included in the platforms Admin Tool).
- If you want to use the platform with a Web server which has the SSL support activated (e.g. <https://eclass.gunet.gr>), you can do it by defining the *urlSecure* variable on *config.php*. e.g.

```
$urlSecure = "https://eclass.gunet.gr".
```

- Finally, it should be noted to the users of the platform that they need to have javascript activated on their browser.
 - For *Internet Explorer* users, choose consecutively *Internet Options/Security/Custom Level/Security Options* from the menu and check the "*Scripting of java applets*" option.
 - For *Firefox* users, choose consecutively *Edit / Preferences / Web features* and mark the "*Enable JavaScript*" option.

- **For Unix/Linux systems only:** After completing installation, you are advised, for safety reasons, to change access rights for the */config/config.php* and */install/index.php* files and allow reading only. (permissions must be set to 444)

Example

```
chmod 444 eclass/config/config.php  
eclass/install/index.php
```