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This document explains how to set up a staging Moodle site of your production site.

### 1. SERVER CONFIGURATION

Before installing anything, make sure that you know all the relevant information about the server:

*Server Name:*

*IP Address:*

*Processor:*

*Memory:*

*Number of hard drives and capacity for each drive*

*Antivirus?*

*Remote access to the service (Remote Desktop Connection is a possible solution)*

*Permissions for administrators group*

### 2. BACKUP OF YOUR PRODUCTION SITE

As the aim of this guide is to set up an exact replica of your Moodle production site, the first thing that we need to do is to backup this main site.

You can schedule a daily backup of your site through a .bat file. The content of the bat file should be similar to this:

```
"@echo off
```

```
:: Configuration
```

```
set TS=%date:~6,4%%date:~3,2%%date:~0,2%%time:~0,2%%time:~3,2%
```

```
set ZIP="c:\Program Files (x86)\7-Zip\7z.exe"
```

```
set OUTPUT_FOLDER=\\route to the backup folder\moodle_backup_%TS%
```

```
mkdir %OUTPUT_FOLDER%
```

```
:: 1. Backup moodle data directory (files etc)
```

```
%ZIP% a %OUTPUT_FOLDER%\moodle_data_%TS%.zip f:\moodle_data >
```

```
%OUTPUT_FOLDER%\backup_files_%TS%.log 2>&1
```

```
:: 2. Backup the Moodle PHP folder
```

```
%ZIP% a \\route to the backup folder\moodle_backup_%TS%\moodle_%TS%.zip f:\moodle >
```

```
%OUTPUT_FOLDER%\backup_php_%TS%.log 2>&1
```

```
:: 3. Backup the Moodle database
mysqldump --user=your user --password=your password > \\route to the backup
folder\moodle_backup_%TS%\moodle_db_backup_%TS%.sql >
%OUTPUT_FOLDER%\moodle_db_backup_%TS%.sql
```

### 3. INSTALLATION

#### 1) Basic requirements:

- Install Mozilla Firefox 8.0.1 as default browser (optional)
- Install Vim (gVim 7.3.46) or any other script editor

#### 2) Folders structure:

The folder structure for a Moodle site would be similar to this:

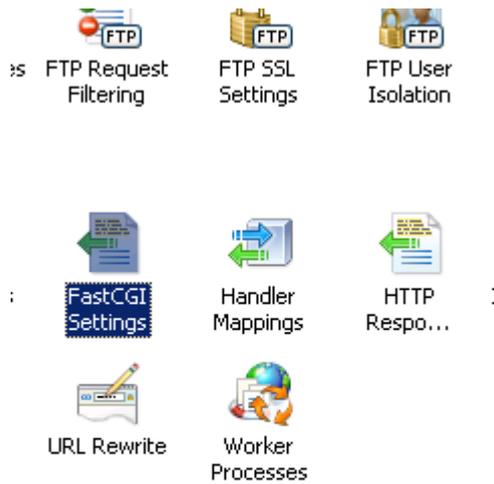
```
e:\moodle (core files)
e:\moodle_data (moodle courses)
e:\mysql_data (database)
e:\php_temporary (temporary folder for php files)
e:\php_testing (folder for testing php scripts)
```

#### 3) IIS Configuration

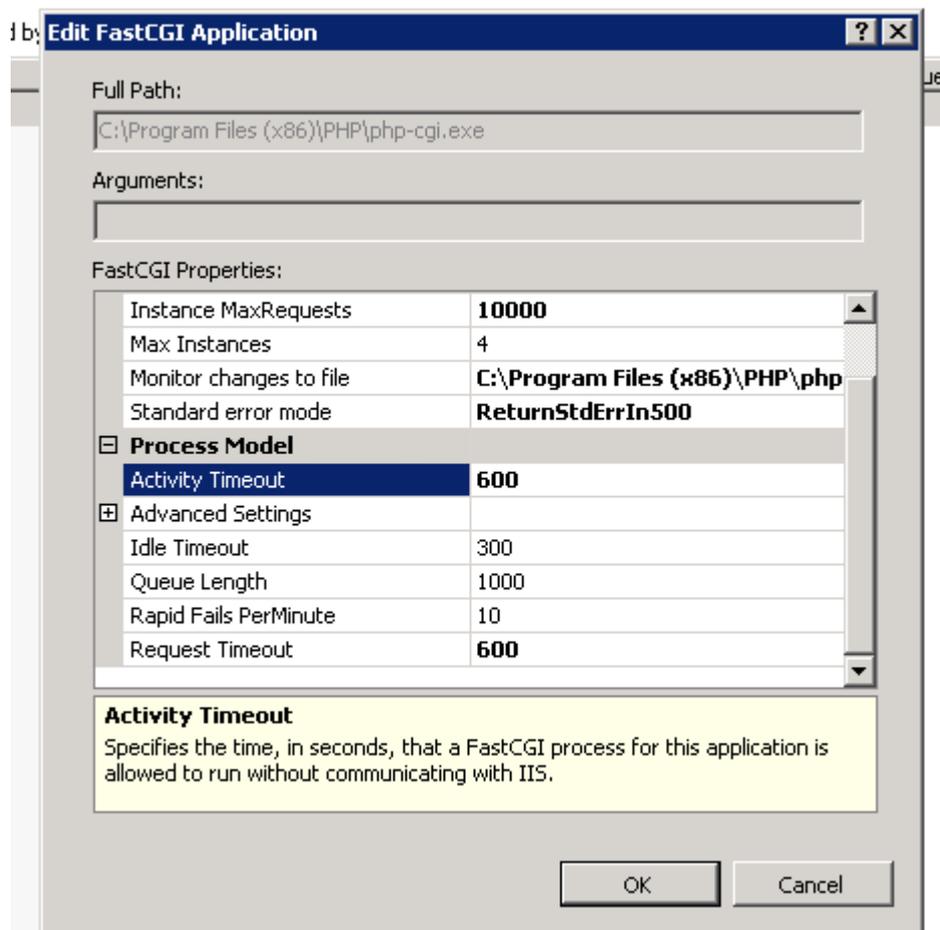
- Added IIS7 role to server with various options installed. (More information on: <http://learn.iis.net/page.aspx/26/installing-and-configuring-iis/>)
- Added a site at port 8080 - mapped to e:\php\_testing
- Extend IIS7 for PHP:
  - \* Download [Web platform installer](#)
  - \* Update to IIS7 recommended configuration for hosting web applications
  - \* Update to Application Request Routing 2.5
  - \* Check that **FastCGI**.is currently installed and have the right values for the following variables, as explained in IIS documentation:

```
Instance MaxRequests: 10000
Activity Timeout = 600
Idle Timeout = 300
Request timeout = 600
```

You can change the values from the IIS manager, by clicking on “FastCGI Settings”



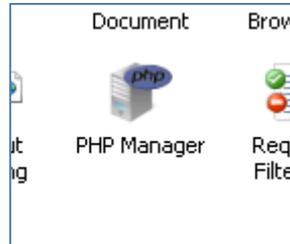
And then “edit”:



You may need to increase these values in future, but make sure that activity timeout and request timeout always have the same value.

#### 4) Changes in php.ini:

In IIS, changes in this file can be done through the Php manager:



And then click on “php settings”

Changes related to Web platform installer:

```
error_log=e:\php_temporary\logs\php_5_2_17_error.log
upload_tmp_dir=e:\php_temporary\upload
session.save_path=e:\php_temporary\sessions
cgi.force_redirect=0
cgi.fix_pathinfo=1
fastcgi.impersonate=1
fastcgi.logging=1
max_execution_time=300 (I changed it to 3600 to solve backup problem, MCG).
date.timezone=Asia/Kuwait
extension_dir="C:\Program Files (x86)\PHP\v5.2\ext\"
```

You may want to increase the maximum file size for Moodle courses by changing the value of the following settings:

```
upload_max_filesize = 80M
post_max_size = 80M
```

Extensions added for Moodle:

```
extension=php_ldap.dll (for ldap accounts)
extension=php_intl.dll
intl.default_locale=en_utf8
intl.error_level=E_WARNING
```

Make sure that the following extensions are also enabled:

```
Php_curl
Php_openssl.dll
Php_xmlrpc.dll
```

Php Version installed: 5.2.17 (as in main server).

Make sure that php is correctly set up by creating an info.php file and running:

<http://localhost:8080/info.php>

#### 5) Configuration of MySQL

- Version 5.5.18 is latest version
- Windows (x86, 64-bit), MSI Installer
- Set up for Multilingual use (UTF8)
- Set up for multifunctional use (InnoDB)
- Set up for shared server (medium memory usage)

Configuration file can be usually found at `\Program Files\MySQL\MySQL Server 5.5\my.ini`

From the Mysql console, create the database of the new Moodle site.

```
mysql> CREATE DATABASE moodle;
mysql> GRANT ALL ON moodle.* TO 'Your MSQL account '@localhost' IDENTIFIED BY 'Your MSQL account ' ; (giving all permission to the MySQL user account )
```

## 6) Restoring Moodle from backup database

Make a backup of the database of your production site, and import it to the testing site:

Source files from [\route](#) to the folder in your production site in which you have stored the backup copy of your database

Download this backup into the test site (I have called it "moodle\_database\_backup.sql"):  
`\download\moodle_database_backup.sql`

How to import the backup database into the new database

From mysql console:

```
% e:
% cd E:\path to the file\ moodle_database_backup
% mysql -u Your MSQL account -p your password moodle < moodle_database_backup.sql
```

Where:

moodle is the name of the new database.

## 7) Configuring Moodle

- Copy all the core files of the `/moodle` directory in the production site to the `/moodle` test site (This is if you want an exact replica of your production site).
- Set up IIS Web site 'Moodle' mapped to `e:\moodle` through the IIS Manager:



In IIS, as we have increased the maximum file size in the php.ini, we need to create a web.config file containing the following line:

```
<security>
  <requestFiltering>
    <requestLimits maxAllowedContentLength="83886080" /> (Make sure that it is the same limit that you have set up in php.ini)
  </requestFiltering>
</security>
```

Web.config needs to be stored in e:\moodle

Modify the config.php file in \moodle:

- Set \$CFG->wwwroot = 'http://your moodle site'
- Set \$CFG->dataroot = 'Path to moodle\_data'
- Check MySQL config by changing the values of:

```
$CFG->dbname = 'moodle';
$CFG->dbuser =
$CFG->dbpass =
```

\* Browse <http://your> moodle site from Firefox.

It is recommended to use a manual account for the administrator, so that you can log in directly in your testing site.