Software requirements

GemsTracker is built in PHP 5.5 on top of the Zend Framework 1 and uses MySQL 5.5 or higher. The development team runs the software on both Windows and Unix systems using both Apache 2 and IIS 7 as servers. Additional web publication environments that support PHP 5.5 and MySQL should work, but we have not tested them so you are on your own.

To use GemsTracker you need:

- a working Webserver (Apache or IIS)
- PHP 5.5 or higher
- Git
- access to a database on a MySQL server version 5.5 or higher
- (optionally) a LimeSurvey 2.00 or higher installation

GemsTracker is built for plug-in survey engines, but the only survey engine currently available in open source is LimeSurvey. At least one other survey system has been implemented but it is not available in open source.

PHP Requirements

As of version 1.8 GemsTracker requires PHP 5.5 or higher. PHP 7 should work but we have no systems using PHP 7 at the moment so it is untested at the moment.

In PHP 5 these modules are required unless stated otherwise:

- APC (strongly recommened)
- Curl
- Dom
- Fileinfo
- GD2
- Intl
- Json
- Multi-Byte string
- MySqli
- OpenSSL
- SOAP
- XMLReader
- XMLWriter
- Zip

Windows Installation notes

GemsTracker with Internet Information Server works best on Windows 7 or Higher en Windows 2008 server and higher, i.e. IIS 7 or higher.

With earlier versions of Windows we advise the use of Apache Web Server, e.g. though the installation

of Xampp http://www.apachefriends.org/en/xampp.html, as IIS 6 needs third party software to run GemsTracker.

Preparations for IIS 7 and higher

In the Windows 2008 "Server Manager" application, make sure the server role "Web Server (IIS)" is installed, with the role service "CGI" enabled. (You can right click the role to check.)

On Windows Vista and Windows 7, enable in the "Control Panel" under "Programs" the Windows Feature: "Internet Information Services" ⇒ "World Wide Web Services" and next make sure the that under "Application Development Features" the "CGI" feature is enabled. The rest you can leave on the default settings. On existing installations make sure that under "Common HTTP Features" the feature "Default Document" is enabled.

Download and install the **URL Rewrite** application from Microsoft. After installation (re)start the "Internet Information Services (IIS) Manager" and check on a site int the tree under your system under "Sites" for an "URL Rewrite" icon in the IIS group of features. You do not need to do anything else, as the configuration for this application is included with the default GemsTracker installation.

Download the latest stable **PHP** version from http://php.net/. Install the latest version that has a Windows installer and choose the "Non Thread Safe" version if available. During installation choose "IIS FastCGI" for Web Server Setup and enable at least these Extensions:

- Curl
- Dom
- Fileinfo
- GD2
- Json
- Multi-Byte String
- MySQLi
- SOAP
- XMLReader
- XMLWriter

You may leave all other extensions on their default selection.

Download the latest stable **Zend Framework 1.x** version (not the 2.x version) from http://framework.zend.com/. Create a directory to copy the library files to, e.g. `C:\inetpub\php_lib` and extract the following directories

- `framework\library\Zend` to `C:\inetpub\php_lib\Zend`
- `framework\extras\library\ZendX` to `C:\inetpub\php_lib\ZendX`

If you have Zend version 2.x already installed and still want to use Gemstracker: Copy the older version of the Zend Framework to a seperate directory, e.g. to library\zend with the Zend and ZendX subdirectories in it.

In index.php add before the last line:

```
    set_include_path('.' . PATH_SEPARATOR . GEMS_ROOT_DIR .
```

```
'/library/zend');
```

This should enable you to work with the older version of Zend.

Next edit the php.ini (probably at C:\Program Files (x86)\PHP\php.ini) and make sure the include_path does include this location .;C:\inetpub\php_lib. (You can also install these framework folders later in the GemsTracker library directory, but then you need to do so for each installation.)

The installation is now prepared, you can **test** the installation by creating in your web root (usually C:\inetpub\wwwroot) a small file called phptest.php with this one line of content:

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

On a standard IIS installation you should then see a page showing you PHP version information when you use this link: http://localhost/phptest.php on a browser on your server. Should you get any errors instead, just Google on what is wrong.

Installing MySQL

For MySQL you may first need to install the **Microsoft .NET 4 Framework**. Just download it from the Microsoft site and run a standard installation.

Download the latest **MySQL** Community Server Edition from http://www.mysql.com/. Install the server; we advice to use the standard "Server" configuration, but you may choose the "Development" or "Custum" configurations if you prefer.

During the rest of the installation you can use the default options, but do not forget to write down the password you must enter for the root user.

If all is well MySQL is now up and running, as you can check in the Windows "Administrative Tools" ⇒ "Services" application, where you should see the MySQL service up and running; or you can login on the Windows command line using:

```
mysql -uroot -ppassword
```

Of course you should use the correct password you wrote down in the previous paragraph.

This installation is sufficient for GemsTracker, but requires you to perform certain installation task using the MySQL command line. So usually the next step is to download the latest stable release of **phpMyAdmin** from www.phpmyadmin.net. After download extract he files e.g. to C:\inetpub\wwwroot\myadmin, copy config.sample.inc.php to config.inc.php and while you may want to edit some settings in this file, you should now be able to get a login screen using this link http://localhost/myadmin on a browser on your server. You can then log in using the name root and you password.

Using phpMyAdmin you can then create databases and users that can the be used by both GemsTracker and LimeSurvey.

Note: use a secure password and preferable use another directory name than admin, myadmin or phpmyadmin as these are favorite hacker targets. The best option would be to configure your web

server so that access to this page is only possible from your own network and not from other locations.