# ESRU

University of Strathclyde

# EnTrak version 9 series

## Manual

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*10 December 2018*

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## System Requirements

EnTrak has been tested on Windows 7 (32 and 64 bit), Windows 10 (64 bit) and Linux OpenSuse Tumbleweed (rolling release) and Mint 17.2 (64 bit). Minimum system requirements are:

- 512MB RAM
- 1GB HDD memory available

EnTrak should not be installed on a computer where any of the following are already installed:

- A file server (apache or similar)
- An SQL database (MySQL or similar)
- PHP

## Installation on 64bit MS Windows10 OS

### *Prerequisites*

For computers running Windows operating systems EnTrak requires:

A) WAMP stack available from the Ampps website to be installed either in the `Program Files` directory or the `Program Files (x86)` directory. Once installed make the following changes to its configuration:
   a. In the file `apache\conf\httpd.conf` replace all occurrences of `80` by `8000`
   b. Add the following lines to the end of the file then save and close it
      i. `RemoveHandler .html .htm`
      ii. `AddType application/x-httpd-php .php .htm .html`
   c. Open file `Ampps\php-5.6\php.ini` using a text editor
   d. Make sure `file_uploads` is set to `on`
   e. Modify the line `upload_max_filesize = 2M` to `32M` or more based on the size of data files that you intend to upload (32M represents 32MB). Now save and close the file
   f. In the file `apache\php.ini` update the variable `post_max_size` to be the same as `upload_max_filesize` (32M for example)
   g. Restart computer. This reconfigures Apache and MySQL and should start these as well. If you do not see the Ampps logo on the right side of the Windows Start Menu Taskbar or in the hidden icons then click on Start Button > All Programs > Ampps > Ampps in order to start Apache and MySQL
   h. Hidden icons may be accessed by pressing the button shown in figure 1. In order to access Ampps right click on the Ampps icon and choose restore. It is useful to start Ampps automatically every time you log in. In order to do that choose configuration instead of restore above and choose to start Ampps automatically

B) Make sure “Everyone” has full access permissions for the folders `C:\Windows\Tasks` and `C:\Windows\System32\Tasks`

C) Make sure there is a folder `C:\tmp` with read/write permissions for “Everyone”

### *Install Procedure*

1. Download and unzip the file `EnTrak_V9.xx_src.zip` from the ESRU Website to a suitable location on the computer
2. Double click on the file `installer.bat`
3. Open a web browser (development and testing have been done using Mozilla Firefox and Google Chrome and are therefore recommended) and make sure popups are allowed from site `localhost:8000`. Now go to `http://localhost:8000` and click on EnTrak

4. Click on `info.php` to check if PHP installation was done correctly. If installed correctly you should see output similar to the one shown in figure 2.
5. Press the back browser button and click on EnTrak again to go to the EnTrak introduction page.
6. Click on database > import to import EnTrak exemplar databases downloaded earlier (in the Databases folder of the installer of step 1). Alternatively import your own or define a new database

### *Post install instructions*

1. Installing a WAMP stack effectively makes your computer an Internet Server and for some configurations (e.g. static IP addresses outside of typical corporate firewalls) it is possible that the `ampps/www` folder becomes World viewable upon typing your IP address in an Internet browser. This behaviour is probably undesired and may be removed by adding the following lines, or modifying the lines if they already exist, in your `apache/conf/httpd.conf`. The change is to be made in the text section labelled `<Directory "C:\Program Files (x86)\Ampps\www">` or equivalent on Linux computers

```
Order deny,allow
Deny from all
Allow from 127.0.0.0/255.0.0.0 ::1/128
Allow from your.IP.address.here
Allow from any.other.IP.addresses
```

   After making this change you may not be able to browse to localhost (although the 127.0.0… line above should allow you to do so) so you may have to explicitly type in your computer's IP address instead (i.e. go to your.IP.address.here/EnTrak instead of localhost/EnTrak).
2. Using a text editor open the files `C:\Program Files (x86)\Ampps\www\EnTrak\EnTrak\2_Projects\DIDDB.bat` and `FIDDB.bat` in the same location and change `C:\"Program Files (x86)"\Ampps\php\php.exe` to `C:\"Program Files (x86)"\Ampps\php-5.6\php.exe`
3. Make the same change as 2 above in the file `C:\Program Files (x86)\Ampps\www\EnTrak\EnTrak\4_ESView\DIDDB.bat`

### *Uninstall Procedure*

The uninstall procedure is only for EnTrak it does not remove the WAMP stack installed in the installation process. Secondly any databases generated with EnTrak are not removed in the uninstall process. These may be removed prior to uninstalling EnTrak by the database delete function on the databases tab.
To uninstall double click the file `uninstaller.bat`, this removes EnTrak from your system. Prior to this you may choose to delete any databases created/imported by EnTrak by going to the databases tab and choosing delete.

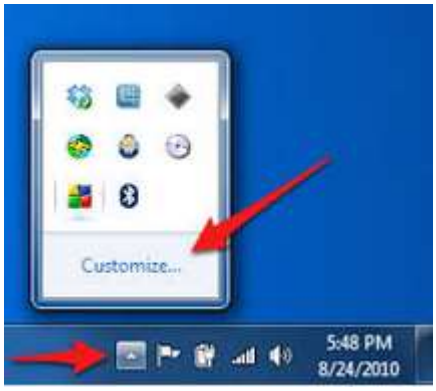

*Figure 1 Accessing hidden icons*

**PHP Version 5.3.29**

| | |
|---|---|
| **System** | Windows NT ABIO 6.1 build 7601 (Windows 7 Business Edition Service Pack 1) i586 |
| **Build Date** | Aug 15 2014 19:15:47 |
| **Compiler** | MSVC9 (Visual C++ 2008) |
| **Architecture** | x86 |
| **Configure Command** | cscript /nologo configure.js "--enable-snapshot-build" "--disable-isapi" "--enable-debug-pack" "--without-mssql" "--without-pdo-mssql" "--without-pi3web" "--with-pdo-oci=C:\php-sdk\oracle\instantclient10\sdk,shared" "--with-oci8=C:\php-sdk\oracle\instantclient10\sdk,shared" "--with-oci8-11g=C:\php-sdk\oracle\instantclient11\sdk,shared" "--enable-object-out-dir=../obj/" "--enable-com-dotnet=shared" "--with-mcrypt=static" "--disable-static-analyze" |
| **Server API** | Apache 2.0 Handler |
| **Virtual Directory Support** | enabled |
| **Configuration File (php.ini) Path** | C:\Windows |
| **Loaded Configuration File** | C:\Program Files\Ampps\apache\php.ini |
| **Scan this dir for additional .ini files** | (none) |
| **Additional .ini files parsed** | (none) |
| **PHP API** | 20090626 |
| **PHP Extension** | 20090626 |
| **Zend Extension** | 220090626 |
| **Zend Extension Build** | API220090626,TS,VC9 |
| **PHP Extension Build** | API20090626,TS,VC9 |
| **Debug Build** | no |
| **Thread Safety** | enabled |
| **Zend Memory Manager** | enabled |
| **Zend Multibyte Support** | disabled |
| **IPv6 Support** | enabled |

*Figure 2 Sample output from phpinfo*

## Outputting to the Cloud (64bit W10 OS)

EnTrak can output to cloud locations in addition to the server on which it runs. This is achieved by making the Outputs folder in standard EnTrak distribution synchronised with the Cloud folder to which output is desired.

### *Secure location*

The steps given below describe how to output from a Windows server to https://strathcloud.sharefile.eu/ as an example secure cloud location.

1. Install the Windows client application following instructions given at http://www.strath.ac.uk/media/ps/its/systemsarchitecture/Installing_Windows_Client_-_ver_2.pdf
2. The local folder used is `C:\Program Files (x86)\Ampps\www\EnTrak\Outputs\My Files & Folders\EnTrak_Outputs` and the cloud folder used is `EnTrak_Outputs` at the highest user accessible folder level within Strathcloud.
3. Open the file `Common/openDB.php` in the EnTrak source code using a text editor. Set `$CloudOutput` to `true` and `$CloudLocation` to `../../Outputs/_Cloud/My Files & Folders/EnTrak_Outputs/`

### *Publically accessible location*

The static URL representing the folder in which output files are to be placed has to be mounted (mapped) as a network drive. The address of the mounted folder is then provided to EnTrak. The steps given below describe how to output to a folder hosted on the Internet that has a static URL using a Windows PC.

1. Map the static URL to the PC following standard network drive mapping (steps to do this are easily available e.g. http://www.it.cornell.edu/services/guides/computer/howto/map_win7.cfm)
2. Open the file `Common/openDB.php` in the EnTrak source code using a text editor. Set `$URLOutput` to `true` and `$OutputWebFolder` to the server address e.g. for the E-services folder on the ESRU website I would enter \\\\mae-web.mecheng.strath.ac.uk/esru/Downloads/E-services/. You would of course require write permission to any Internet location.

## Good to know / answers to FAQ / common problems and their solutions

1. Do not begin project/database names with underscore.
2. If you cannot import/export projects, collect data or run services ensure that EnTrak knows the operating system. Open Common/OpenDB.php in a text editor and check for variable $OS