

Peos installation

Install cygwin

1. Download cygwin *setup.exe* from <http://www.cygwin.com/install.html> and save to your computer
2. Run *setup.exe*
3. Accept all the default settings in the first dialog boxes
4. In Choose a Download Site select a site near your location
5. In the Select Packages dialog box select the following packages in addition to the ones selected by default:
 - Devel:
 - i. bison
 - ii. check
 - iii. flex
 - iv. gcc-core
 - v. libncurses-devel
 - vi. make
 - vii. openssl-devel
 - viii. readline
 - Libs
 - i. libncurses-devel
 - ii. libreadline7
 - iii. libxml2
 - iv. libxml2-devel
 - v. libxml2-doc
 - vi. openssl-devel
 - vii. readline
 - System
 - i. util-linux
 - Tcl
 - i. all packages
 - Text
 - i. util-linux
 - Utils
 - i. util-linux
6. On Resolving Dependencies dialog box select the option Select required package, so that all the dependencies will be installed.
7. Press Next and the packages will be installed (it can take a while...).
8. Add cygwin to the path:
 - Go to Control Panel -> System
 - Select Advanced System Settings
 - Press Environment Variables... button
 - In System Variables double click on Path

- Add “;C:\cygwin\bin” at the end of the path and press OK
- Press OK on all the open dialog boxes to accept the changes.

Install xampp

(This is only needed for running the peos web applications; it is not needed for running the pmlchecker.)

Download xampp windows installer from <http://www.apachefriends.org/en/xampp-windows.html> and run it.

To run xampp go to Start | Programs | XAMPP to start the Panel Control. In the panel control it is possible to start all the services. Only the Apache service is needed to run the peos web applications.

Compile and install peos

1. Download peos code from <https://github.com/padraigoleary/PEOS> by clicking on the Download Zip button.
2. Unzip the download file.
3. Start windows command prompt and go to the root directory of the unzipped files (peos-master).
4. Type *make* at the command prompt and press Enter; this will invoke *make* recursively in *pml*, *os/kernel*, *ui/web2*, and *ui/ajax-cgi*.
5. Ignore errors related to testing.
6. You should get an error related to the file *y.tab.h*.
 - Locate the file *y.tab.h* in *pml/pml* folder
 - Open it with a text editor that displays the line numbers (like Notepad++)
 - At line 39 replace *#if* with *#ifdef*
 - Save the file
7. Run the *make* command again. This time it should complete the making process up to the *web2* folder. Again ignore errors related to testing.

NOTE: *make* might not work; if it doesn't, enter the following sequence of commands at the dos prompt:

- `cd pml`
- `make`
- `cd os/kernel`
- `make lib`

Install and run the web applications

(this is not needed if you want just run the pmlcheck)

1. *web2*
 - Edit *ui/web2/Makefile* to set the directory where the file need to be installed in the web server. This is not needed if you kept the default installation directory for xampp
 - At the command prompt change the directory to *ui/web2/*, type *make install* and press Enter. This will install all the file needed for the web application.

- To run the web application, in a web browser type the address <http://localhost/peos/> (remember to start Apache before launching the application).
 - The login credentials are admin/admin
2. ajax-cgi
- Edit *ui/ajax-cgi/Makefile* to set the directory where the file need to be installed in the web server. This is not needed if you kept the default installation directory for xampp
 - At the command prompt change the directory to *ui/ajax-cgi/*, type *make install* and press Enter. This will install all the file needed for the web application.
 - To run the web application, in a web browser type the address <http://localhost/peos1/> (remember to start Apache before launching the application).
3. carepathways
- Edit *ui/carepathways/Makefile* to set the directory where the file need to be installed in the web server. This is not needed if you kept the default installation directory for xampp
 - At the command prompt change the directory to *ui/carepathways /*, type *make install* and press Enter. This will install all the file needed for the web application.
 - To run the web application, in a web browser type the address <http://localhost/carepathways/> (remember to start Apache before launching the application).

Run the pmlcheck

The pmlcheck application is located in the folder peos-master\pml\check.

To run it go to this folder and run

```
pmlcheck <path-to-pml-file>/pmlfilename.pml
```

For example if your pml file is test.pml located in the folder C:\pmlfiles the command would be the following:

```
pmlcheck C:\pmlfiles\test.pml
```

Make a graph

The pml file can be transformed in a .dot graph file that can be viewed with Graphviz.

To create the .dot file run the traverse utility located in the folder peos-master\pml\graph using the following command from the command prompt:

```
traverse path-to-pml-file/pmlfilename.pml > path-to-dot-file/dotfilename.dot
```

For example if your pml file is test.pml located in the folder C:\pmlfiles and you want to create a .dot file in the same directory with the same file name the command would be the following:

```
pmlcheck C:\pmlfiles\test.pml > C:\pmlfiles\test.dot
```

The created file can be viewed with Graphviz.

Graphviz can be downloaded from <http://www.graphviz.org/>