

Recommended Steps for OpenMDAO, FUSED-Wind and WISDEM Installation on Windows

Note: not all of these steps are necessary depending on your machine and set-up of python; this instruction kit is meant to be an exhaustive catch-all of steps to avoid potential issues.

Installation Steps for OpenMDAO

- 1) See <http://openmdao.org/docs/getting-started.install.html> for basic instructions
 - a. If your company operates behind a firewall, you may have issues with the installation of OpenMDAO; if so, wait to install outside of your company network
- 2) Make sure you have Mingw installed
 - a. Install mingw www.mingw.org with basic support, gcc C++, gcc fortran
 - b. Also helpful to install msys for the mingw shell
 - c. Add the mingw bin directory to system path
- 3) (optional) Also install Microsoft Visual Studio 2010 if it's not already installed
 - a. from the command line run SET VS90COMNTOOLS=%VS100COMNTOOLS%
- 4) Install the Python 2.7.6 (or higher) 32-bit version from www.python.org
 - a. Python 2.7.5 has a bug in distutils where "-mno_cygwin" is added to the gcc compile line (no longer allows by gcc4.7 and more recent versions)
 - b. Make sure its 32-bit; 64-bit doesn't play nice with numpy and some other packages that are needed
 - c. Make sure to choose option to install just for your user account (do NOT select install for all users); if you select wrong, then the Microsoft visual studio support files (Microsoft.VC90.CRT.manifest and msvcr90.dll [will not install](#)).
 - d. Add python 2.7 directory to system path; also add python scripts and libs directories to your system paths
 - e. In your home directory create pydistutils.cfg and add the following text:

```
[build_ext]  
compiler=mingw32
```

- f. Install setup tools using ez_setup.py <https://pypi.python.org/pypi/setuptools#windows> (if not automatically installed with your python version)
- g. Install various necessary python packages by downloading from sourceforge (they will not easy_install or pip install on windows properly):
 - i. Numpy
 - ii. Scipy
 - iii. Matplotlib
 - iv. Pywin32

- v. Pandas – note Pandas will require mingw (or other compiler) before installing properly
- 5) Install openmdao (version 0.7.0 or later) using go-openmdao.py
<http://openmdao.org/docs/getting-started/install.html>
- a. Follow installation guide on website
 - b. Need to add slsqp egg from here: <http://openmdao.org/forum/questions/852/install-issues-version-070> (follow instructions on forum post)
 - i. Obtain slsqp egg
 - ii. Add to dists directory in path
 - iii. Use command **python go-openmdao.py --extra-search-dir=dists --findlinks=dists**
 - c. From within openmdao-0.7.0 directory do:
 - i. Scripts\activate
 - ii. Openmdao test
 - d. If slsqp is properly installed and mingw properly linked to python, then installation should return no errors

Other notes:

- If you build the docs for a openmdao plugin on your computer, make sure the openmdao environment is activated before building them

Installation Steps for WISDEM and FUSED-Wind

See <https://nwtc.nrel.gov/WISDEM> for detailed instructions on installing WISDEM (with FUSED-Wind) on Windows machines.

Other python dependencies for WISDEM and FUSED-Wind (those not listed explicitly above) should be installed automatically when WISDEM is installed but if there are import errors after installing WISDEM for python packages then use [easy_install](#) or [pip install](#) to install them and report the bug on github issues