

Installation of OpenCalphad on Windows using MinGW

Bo Sundman, September 22, 2016

There is no automatic installation routine for OC, you must download and compile the software yourself. You may also have to install Fortran compilers and the GNUPLOT software if you do not already have them. The OC development team cannot offer you any help for that, please ask some local experts if you need help.

On Windows you can use a native Fortran compiler like Microsoft Developer Studio or Intel. There is no installation guide for that. Maybe you can use some of the information below. Usually you have to pay for these so you may be able to get some help from the vendor if you have problems.

Most academics use the free MinGW or Cygwin system with several compilers which emulates (in slightly different ways) a linux computer on Windows. This guide is for MinGW. There is a French guide for Cygwin which is more elaborate and does not require that you understand much French.

The description below applies when installing OC on Windows using MinGW, the guides available are:

- Install-OC-Windows-MinGW
- Installation de OC sous Windows avec Cygwin (in French)
- Install-OC-Linux

Step by step installation:

- The code is written in the new Fortran standard and requires a compiler like GNU Fortran 4.8 or similar.
- If you have not already installed MinGW and the Fortran compiler you must do that from <https://SourceForge.net> or some similar site. If you have MinGW but not the Fortran compiler you must add that. The MinGW software is free.
- Rename the file “linkmake” to linkmake.cmd so it can be executed.
- If you have access to several CPUs you can test OC with parallelization using Open MP. In that case you should use the linkfile “linkpara” below (after renaming it to linkpara.cmd).
- Open a terminal window. If you do not know what is a terminal window you should ask a local expert. Keep him or her with you until you finished the installation.

- In the terminal window you may have to use “cd” (change directory) until you reach the direcorey where you unzipped OC. Then exectute the file you just renamed by typing its name.
- **If you have errors running the linkmake or linkpara command files please contact a local expert.**
- For the graphics you must download and install the free GNUPLOT software, you can find that on SoureForge.

Make sure your PATH includes the directory with the GNUPLOT program. If you do not know how to set your PATH ask a local expert.

- Creating a home directory for OC
 - Create a directory called OCHOME at you home directory, usually “C:\Users\yourname”.
 - Create an environment variable for your account called OCHOME with the path to your OCHOME directory as value. If you do not know how to create an environment variable please ask a local expert.
Normally you have to restart your computer to make the environment variable available.
 - Copy the file ochelp.hlp to this directory
 - Later you may also add a macro file on this directory called “start.OCM” that will be run everytime you start OC. You may also create a direcorey called “databases” with databases you use. Such databases will be searched if you prefix the database name with “ocdata/” in the command “read tdb”
 - If you want to start the OC program from any directory copy also the executable to OCHOME and add the path to OCHOME to your %PATH%
- Look in “after-installation” for help to use OC.

You are welcome to help providing a better installation guide also!

Have fun and help make OC useful!