

To run the Intel Fortran compiler on Windows 10, first the appropriate version of Visual Studio must be installed. This documentation assumes that Microsoft Visual Studio 14.0 (i.e., Visual Studio 2015) was installed, with Intel Composer XE 2015 containing the Fortran compiler libraries.

Environmental Variables

The following environmental variables should be set in addition to any other existing environmental variable values for each variable name. The environment variable name is given in bold and is followed by the values that should be assigned to it. It is particularly important to not overwrite any existing values for **path**. If these environmental variables are set for the system, then the Fortran compiler will be set up for all users. If these environmental variables are set for only the current user, then this will need to be repeated for each user.

add_include

```
C:\Program Files (x86)\Intel\Composer XE 2015\compiler\include;  
C:\Program Files (x86)\Intel\Composer XE 2015\compiler\include\intel64;  
C:\Program Files (x86)\Intel\Composer XE 2015\mkl\include;  
C:\Program Files (x86)\Microsoft Visual Studio 14.0\VC\atlmfc\include;  
C:\Program Files (x86)\Microsoft Visual Studio 14.0\VC\include;
```

add_lib

```
C:\Program Files (x86)\Intel\Composer XE 2015\compiler\lib;  
C:\Program Files (x86)\Intel\Composer XE 2015\compiler\lib\intel64;  
C:\Program Files (x86)\Intel\Composer XE 2015\mkl\lib\intel64;  
C:\Program Files (x86)\Intel\Composer XE 2015\compiler\lib\intel64;  
C:\Program Files (x86)\Microsoft Visual Studio 14.0\VC\lib\amd64;  
C:\Program Files (x86)\Microsoft Visual Studio 14.0\VC\PlatformSDK\lib\x64;
```

add_path

```
C:\Program Files (x86)\Intel\Composer XE 2015\bin\intel64;  
C:\Program Files (x86)\Intel\Composer XE 2015\redist\intel64\compiler;  
C:\Program Files (x86)\Intel\Composer XE 2015\redist\intel64\mpirt;  
C:\Program Files (x86)\Intel\Composer XE 2015\bin;  
C:\Program Files (x86)\Microsoft Visual Studio 14.0\VC\bin;  
C:\Program Files (x86)\Microsoft Visual Studio 14.0\VC\bin\x86_amd64;  
C:\Program Files (x86)\Microsoft Visual Studio 14.0\Common7\Tools;  
C:\Program Files (x86)\Microsoft Visual Studio 14.0\Common7\Tools\bin;
```

path

```
%SYSTEMROOT%;  
%SYSTEMROOT%\system32;  
%SYSTEMROOT%\System32\Wbem;  
%SYSTEMROOT%\System32\WindowsPowerShell\v1.0;  
%USERPROFILE%\AppData\Local\Microsoft\WindowsApps;  
%add_path%;
```

The first four variables in **path** (i.e., the ones starting with %SYSTEMROOT%) are default system variables for Windows 10 that should be set so all command line functions work properly.

Compiling a program

To build a program, the following commands must be run. Calling `ifortvar.bat` makes sure that all the necessary environmental variables are set for the `ifort` compiler. Without calling `ifortvars.bat` first, even with the environmental variables on the previous page set correctly, there may be an error when compiling due to it not being able to find components.

```
call ifortvars.bat intel64 vs2015  
ifort <compiler flags> <list of *.for files, except for header file> -o  
<executable file name>
```

Below is a specific example, where an executable file “run.exe” is generated using multiple source files and the specific compiler options “-O3” and “-traceback”. For more compiler options, please refer to Intel Fortran compiler documentation.

```
call ifortvars.bat intel64 vs2015  
ifort -O3 -traceback arr_alloc.for bound.for coeff.for ^  
enth_to_temp.for fluxes.for freesur.for geom.for initialize.for ^  
input.for main.for modify.for ndnumber.for output.for poolsize.for ^  
postcal.for propertyC.for propertyT.for residual.for solve.for ^  
temp_to_enth.for user.for vaporization.for -o run.exe
```