Compiling Abaqus 6.12-1 With Intel Fortran 13.0.1

The compilation procedure presented here applies to
- Abaqus 6.12-1
- Microsoft Visual studio 2012(Version 11.0.50727.1)
- Intel Parallel Studio XE 2013(64 bit) (Version 13.0.1.119)

Other versions of 6.12 with Microsoft Visual studio 11 and Intel FORTRAN 13 might work in this way.

1. At first go to the following directory C:\Program Files\ SIMULIA\Abaqus\Commands and right click on "abq6121.bat" to edit the file.

   At the beginning the file will appear as,
   @echo off
   "C:\Program Files\ SIMULIA\Abaqus \6.12-1\code\bin\abq6121.exe" %*

2. We have to add the two batch files from Visual Studio and Intel Fortran. The files are "vcvars64.bat" and "ifortvars.bat" respectively. If the location of the file is not known, then use search option on C:\Program Files (x86).

3. When the files are located then add the location of the file in the "abq6121.bat". The modified batch file reads like this.

   @echo off
   @call "C:\Program Files (x86)\Microsoft Visual Studio 11.0\VC\bin\amd64\vcvars64.bat"
   @call "C:\Program Files (x86)\Intel\Composer XE 2013\bin\ifortvars.bat" intel64
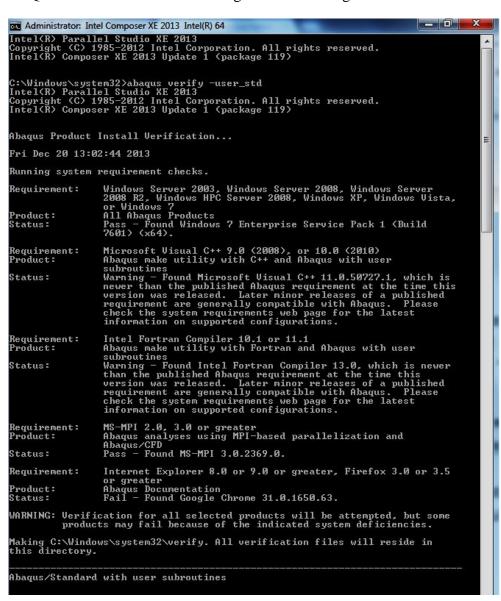   *"C:\Program Files\abaqus\6.12-1\code\bin\abq6121.exe" %**

4. Now if you open the ABAQUS Command Window, it will show that Intel(R) Parallel Studio XE 2013 is linked.

5. Try to run a Subroutine through ABAQUS. If it does not work, add the following 'path' to your computer. Go to 'Environment Variables' from control panel and edit 'path variable' listed in 'System variables'. Search for the path of following files and add them.

   - *C:\Program Files (x86)\Microsoft Visual Studio 11.0\VC\bin*
   - *C:\Program Files (x86)\Intel\Composer XE 2013\compiler\lib\intel64*
   - *C:\Program Files (x86)\Intel\Composer XE 2013\mkl\bin\intel64*
   - *C:\Program Files (x86)\Intel\Composer XE 2013\bin\;*
   - *C:\Program Files (x86)\Common Files\Intel\Shared Libraries\redist\intel64\mpirt*
   - *C:\Program Files (x86)\Common Files\Intel\Shared Libraries\redist\ia32\mpirt*
   - *C:\Program Files (x86)\Microsoft Visual Studio 11.0\VC\bin\amd64*

6. If the subroutine still doesn't run, the 'Target' property for the ABAQUS command needs to be edited. For this right click on ABAQUS Command from 'start menu' and click on 'properties'. Now edit the 'Target' window and it should appear as follows after editing,

C:\Windows\SysWOW64\cmd.exe /k "C:\Program Files (x86)\Intel\Composer XE 2013\bin\ifortvars.bat" intel64

7. You can check the verification of your ABAQUS installation and its collaborating softwares. For this check start the ABAQUS command window and type,
   abaqus verify –user_std
   The ABAQUS command window should give the following verification information.

Since the updated versions of Intel FORTRAN Compiler and Visual Studio were used, two warning messages for these softwares were shown. But the User Subroutine should work with this setting.