**How to Set up Visual Studio 2017 for use with the CPLEX Callable Library 12.1x64**

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Step 1: Start a new project. Start Visual Studio 2017

From the Start Page: Select File

New

Project

Select Visual C++

Select Windows Console Application

Type the name you want to give your Algorithm under ‘Name:” (e.g. **Algorithm**), and set the “Location:” where to save the project (e.g. **H:\MyBenders**)

Click OK.

Click Finish

Step 2: Add all source files.

Assuming you have the code already written or partially written, we now add the files to the project. If you have nothing new, just add new .h and .cpp files as needed.

First copy all source (.cpp) and header (.h) files to your project folder (this is the location that you set up in Step 1.) The path will end in **\Algorithm\ Algorithm\**

On the Solution Explorer window Right Click Header Files

Add

Existing Item

(now select all .h files that you have in your project folder) Right Click Source Files

Add

Existing Item

(now select all .cpp files that you have in your project folder)

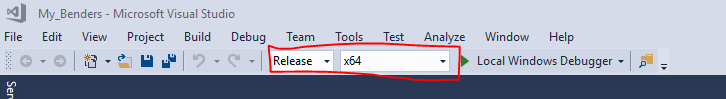
Step3: Link C++ to CPLEX

For the following instructions, assume you have named your project “**Algorithm**”.

Click Project from the menu

Select **Algorithm** Properties…

At the top of the window, change Configuration



Click Configuration Manager

Under Active Solution configuration choose Release.

Under Active Solution Platform, choose x64

Click Close.

Click on Configuration Properties (a new drop down list appears)

At the top of the drop down list, change the configuration to Release. Change platform to x64.

1. Click the (+) next to C\C++
   1. Select General
      1. For Additional Include Directories, add C:\Program Files\IBM\ILOG\CPLEX\_Studio129\cplex\include\ilcplex
      2. For Debug Information Format, choose C7 compatible.
      3. Click Apply.
   2. Select Preprocessor
      1. Add to the Preprocessor Definitions field:

IL\_STD

* + 1. Click Apply.
  1. Select Code Generation
     1. Change Enable Minimal Rebuild to No (/Gm-)
     2. Set Runtime Library to: Multi-threaded DLL (/MD)
     3. Click Apply

1. Click on the (+) next to Linker
   1. Select General and in Additional Library Directories add C:\Program Files\IBM\ILOG\CPLEX\_Studio129\cplex\lib\x64\_windows\_vs2017\stat\_mda\ (Don’t forget the backslash at the end)
   2. Select Input and then select the Additional Dependencies field Add: cplex1290.lib
   3. Click Apply
2. Add Command Line Arguments

(For Dr. Ntaimo’s code, you must tell Visual Studio what command arguments to use. Problems must be located in your \PROJECTNAME\PROJECTNAME folder.)

* 1. Click Debugging
  2. Add the problem name to Command Arguments, ignoring the file extension
  3. Click Apply

1. Click OK.

Step 4: One last Step…

Go to C:\Program Files\IBM\ILOG\CPLEX\_Studio129\cplex\bin\x64\_win64 and copy the file “cplex1290.dll” to your

ALGORITHM\ALGORITHM file.

Now you are ready to compile and run your code.