Setting up the Visual Studio Express 2017 Compiler for MapleSim

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MapleSim™

The Build Tools component of the Microsoft Visual C++ Compiler is required for MapleSim on Windows in a couple of cases:

- Exporting an FMU with the FMI Connector.
- Using the Simulink Component Block Generation app with the Generate and Compile S-Function option.
- Simulation of JMAG models

## Installing Microsoft Visual Studio Express 2017

➢ **Note:** This guide assumes that you have already installed Maple and MapleSim. If you are having difficulties with these installations please contact Maplesoft Technical Support (support@maplesoft.com) before continuing.

➢ **Note:** You need to log into a Windows account with administrative privileges to set up and install the Microsoft Visual C++ compiler.

1. In a web browser window, go to https://www.visualstudio.com/vs/visual-studio-express/:

2. Scroll down on the page to the **Still want Visual Studio Express?** section:



3. Select **Express 2017 for Windows Desktop** and the installer file will download.

4. Locate the installer file, likely in your **Downloads**. Right-click on the file and **Run as Administrator**.

5. The **Visual Studio Installer** will launch:
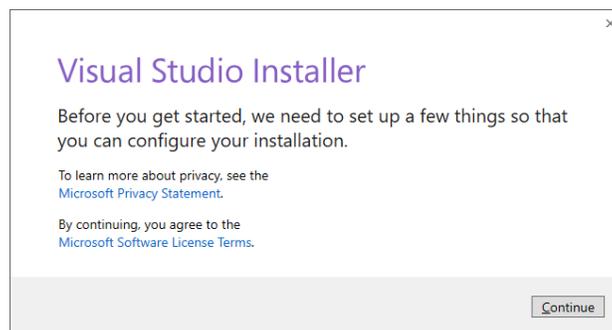
6.  Select the **Language** and click **Install**:
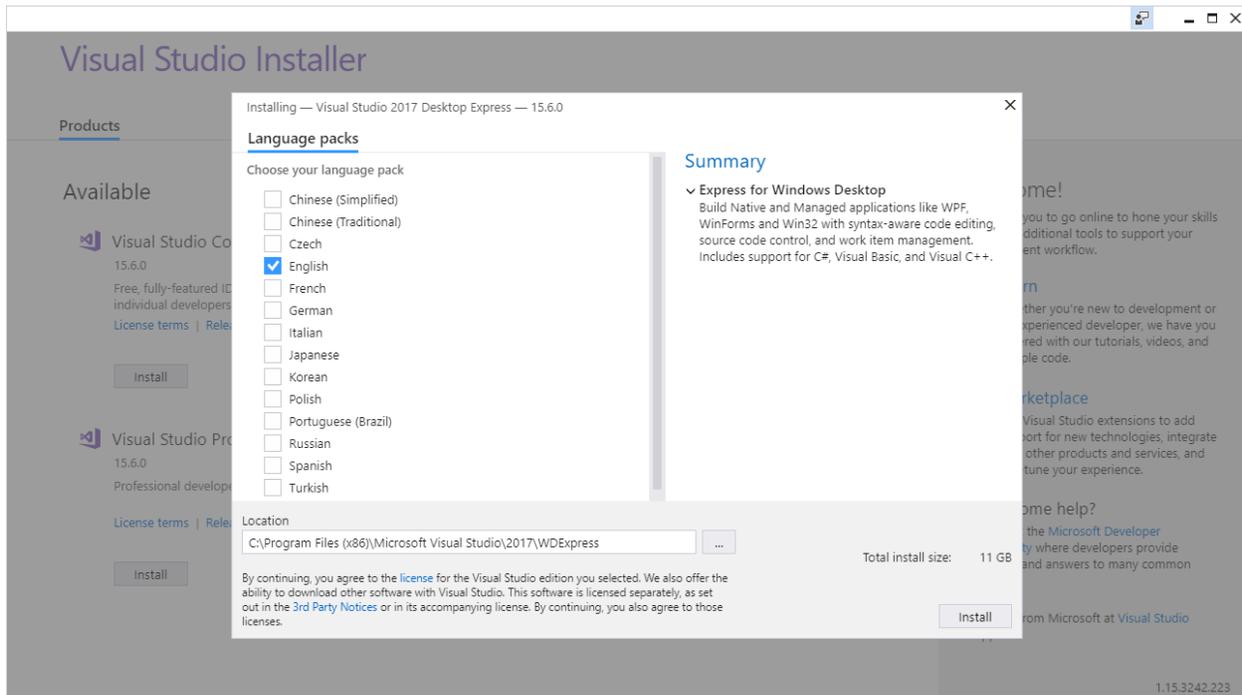


7.  Visual Studio 2017 Desktop Express will install. It is rather large and so this may take some time:

8.  Once the installation is complete, you will be informed that the **Installation succeeded.**

9.  You can close this window. You may be prompted to sign in but you can close this dialogue as well:
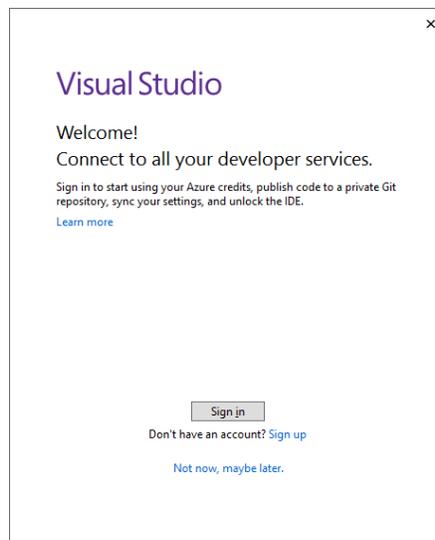


10. You will need to **restart your system** to complete the installation.

## Configuring the Compiler in Maple

1. **Open Maple** with administrative privileges by right-clicking the shortcut and choosing **Run as Administrator.**

2. Open a new Maple document or worksheet.

3. At the Maple prompt, type `Compiler:-Setup();` and press **Enter:**
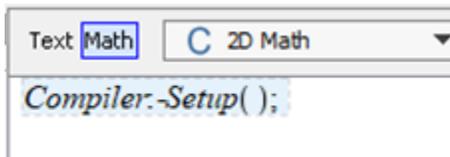


4. The **Configure MSVC Complier** dialogue will open.
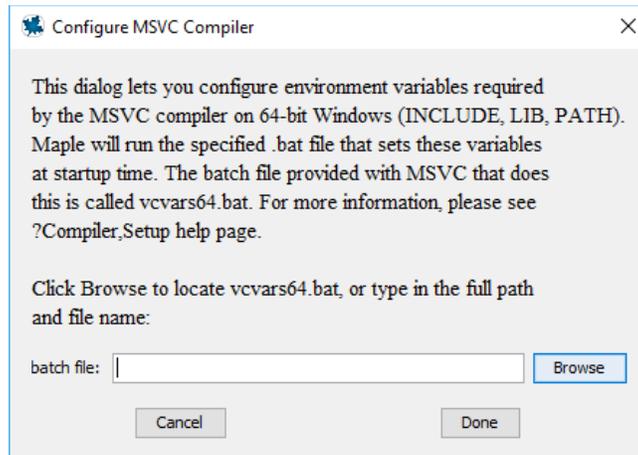


If you installed to the default location, you can paste:
C:\Program Files (x86)\Microsoft Visual Studio\2017\WDExpress\VC\Auxiliary\Build\
vcvarsx86_amd64.bat
in the **batch file** box and click **Done.**

Alternatively, you can click **Browse** and follow this path:

This PC > Local Disk (C:) > Program Files (x86) > Microsoft Visual Studio > 2017 >WDExpress > VC > Auxiliary > Build > vcvarsx86_amd64.bat

5. The Maple return should be the file path. If it does not echo back the file path, please run the command again and double check that you have selected the correct file. An error will also occur if you did not open Maple with administrative privileges.

## Confirming MapleSim is Using the MSVC Compiler

Now that the installation and setup is complete, you can confirm if the install was a success by running a sample simulation in MapleSim and verifying that the external compiler is being used.

1.  Open MapleSim and choose an example model like **Help** > **Examples** > **Physical Domains** > **Multibody** > **Catapult**

2.  In **Simulation Settings**, ensure that the option for **Compiler** is **checked** so that the external compiler will be used in simulation:
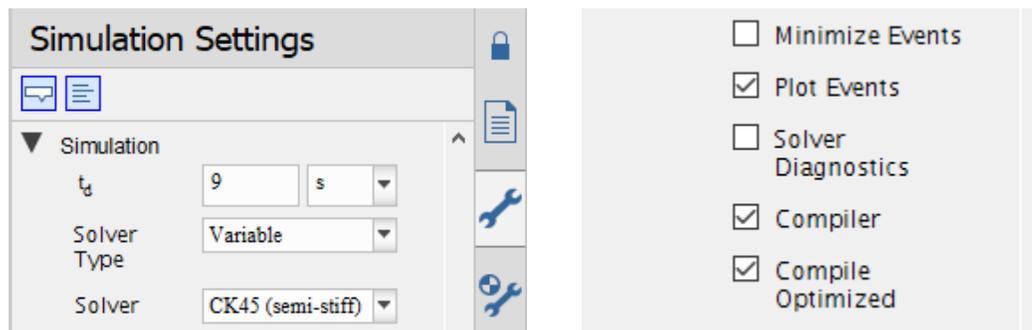


3.  Click the **Run Simulation** button to perform the test.

4.  In the **Console Output** (bottom palette), open up the **Preparing for Integration** branch:
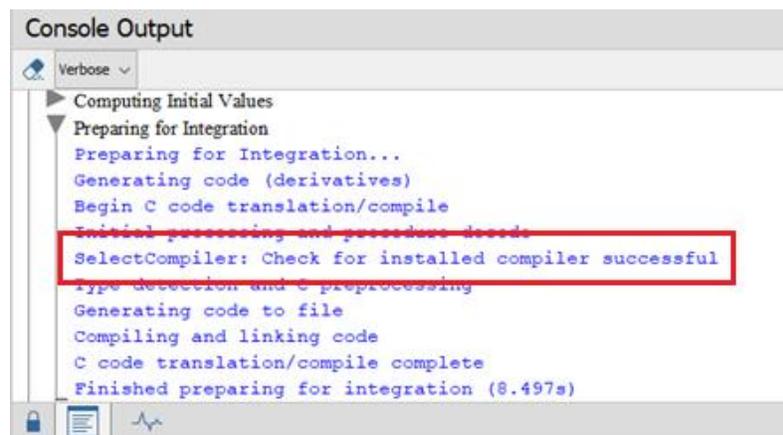


5.  Verify that you see
    **SelectCompiler: Check for installed compiler successful**.

If you do not see the message above but instead see **SelectCompiler: Check for installed compiler failed, using built-in,** please ensure that you have done the correct setup and if issues still remain please contact Maplesoft Technical Support at support@maplesoft.com.