Mastercam API Example

Overview

This document outlines the steps required to build and deploy the NETHook project.

Visual Studio Setup

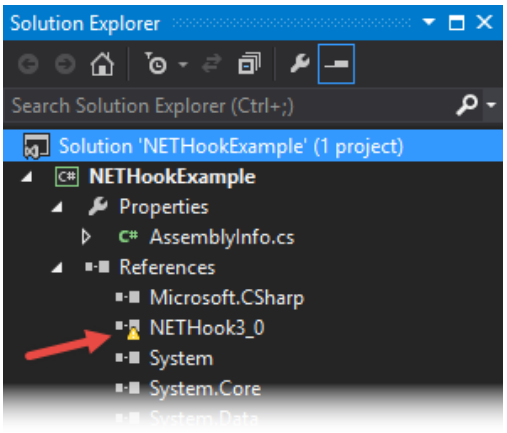
Visual Studio must be in administrator mode (as Administrator) for this project to build properly. The easiest way to do this is to setup your Visual Studio shortcut to always run as Administrator by doing the following…

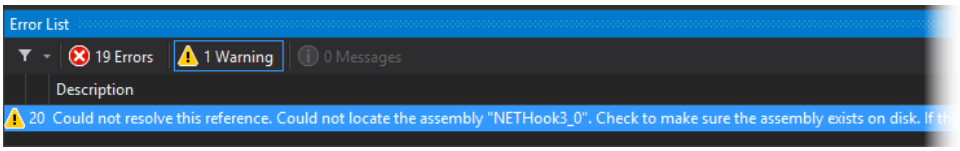
1. Right-click on your Visual Studio shortcut and select **Properties**
2. In the **Properties** dialog, click the **Shortcut** tab
3. Click the **Advanced…** button
4. Check the **Run as administrator** option in **Advanced Properties** dialog
5. Click **OK** to close the **Advanced Properties** dialog
6. Click **OK** again to save and close the shortcut properties

Project Setup

This NETHook project was written in Visual Studio 2013 and targets the .NET 4.0 Framework as well as the Mastercam NET-Hook 3.0 library (**NETHook3_0.dll**). This project may work with multiple versions of Mastercam, but **Mastercam X8** is the focus of this project.

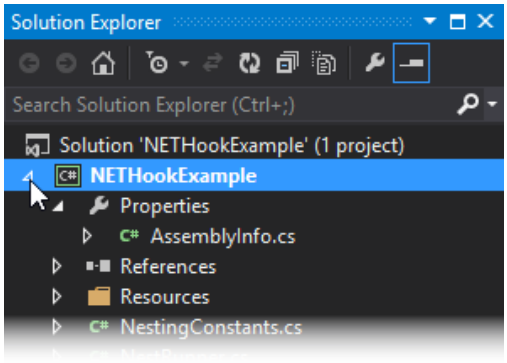
1. Make sure the reference to the **NETHook3_0** library is valid. If there is a warning symbol displayed on the **NETHook3_0** reference in the Solution Explorer, or if you receive errors/warnings, such as the one below, when building the project, the path to your **NETHook3_0.dll** file may need to be re-established.



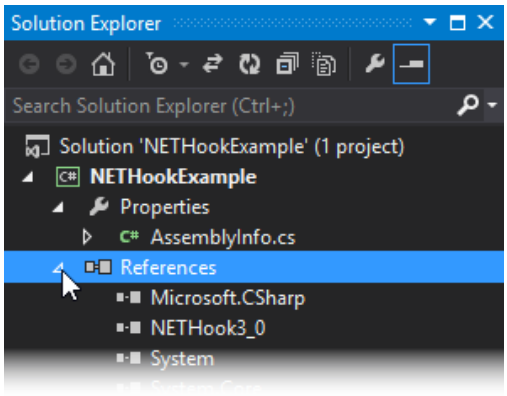


This can be done in the **Solution Explorer** by removing the existing **NETHook3_0** reference and then re-adding it per the steps below.

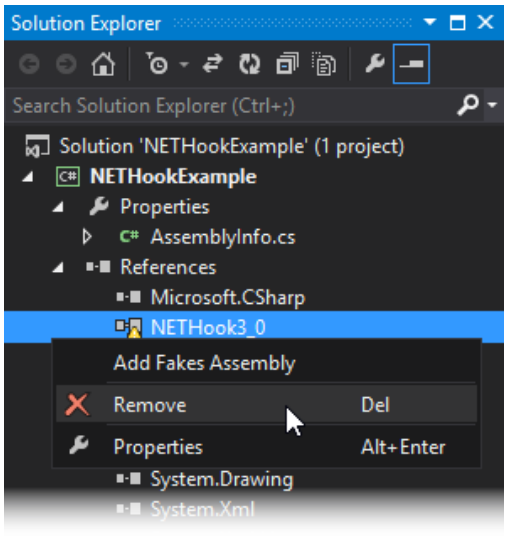
1. If necessary, expand the main project node



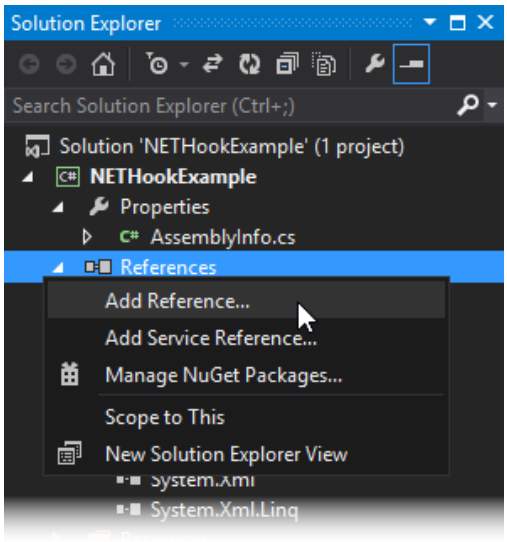
2. Expand the **References** node



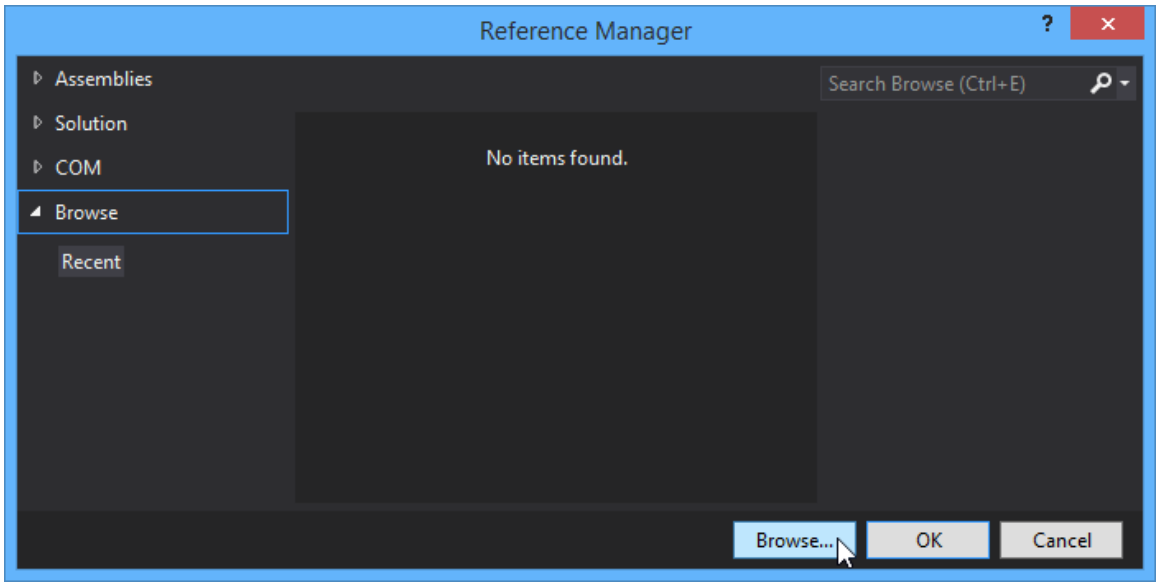
3. Right-click on the **NETHook3_0** reference and click **Remove**



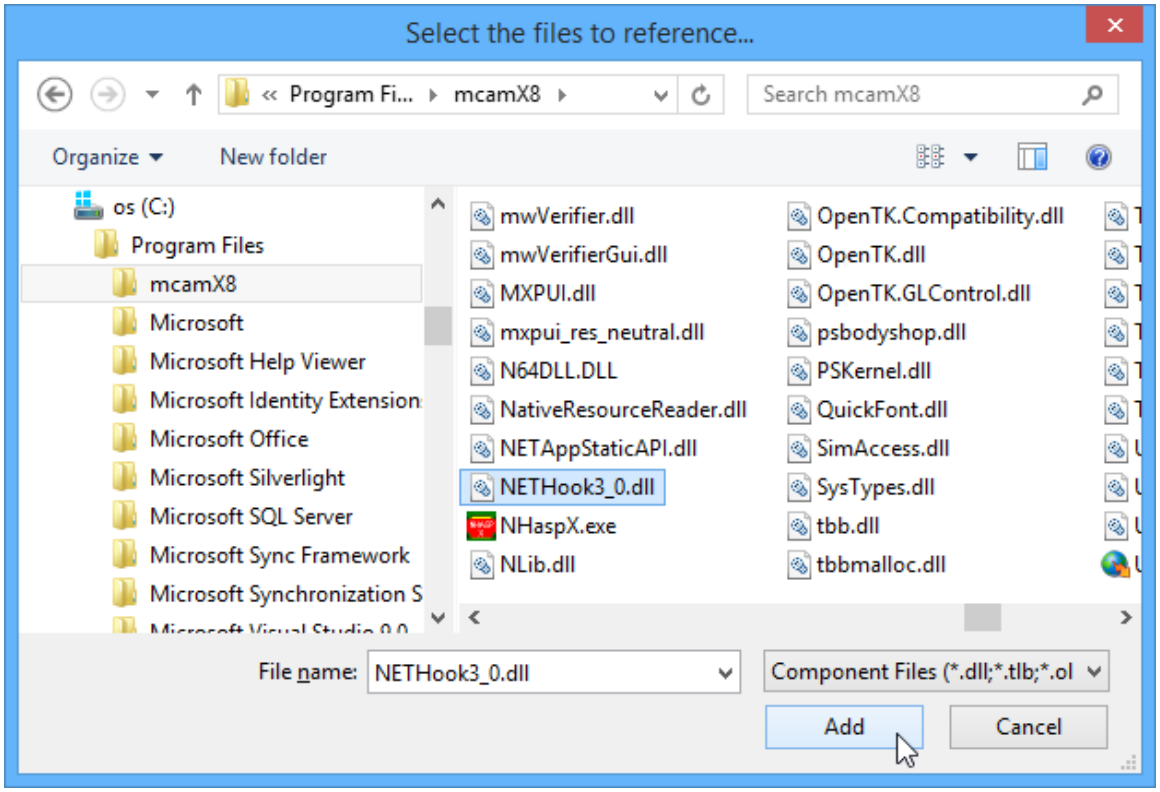
4. Right-click on the **References** node and click **Add Reference…**



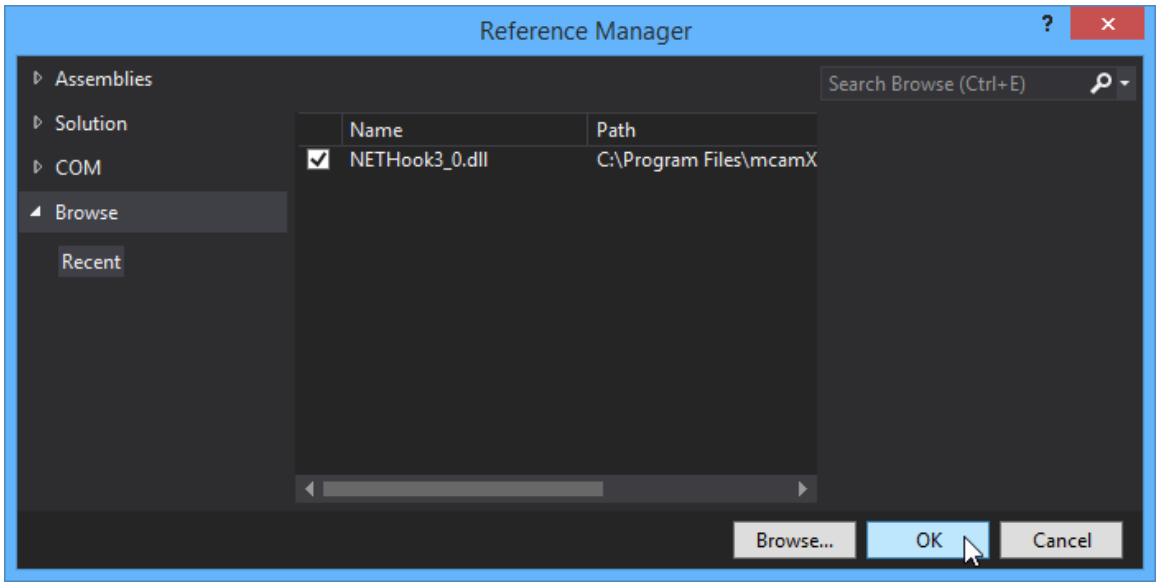
5. In the **Reference Manager** dialog, click the **Browse…** button



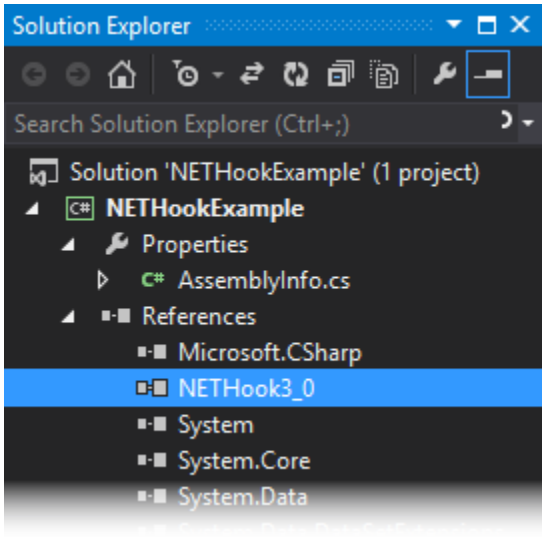
6. Browse to the Mastercam installation folder (e.g., C:\Program Files\mcamX8), select the **NETHook3_0.dll** file and click **Add**



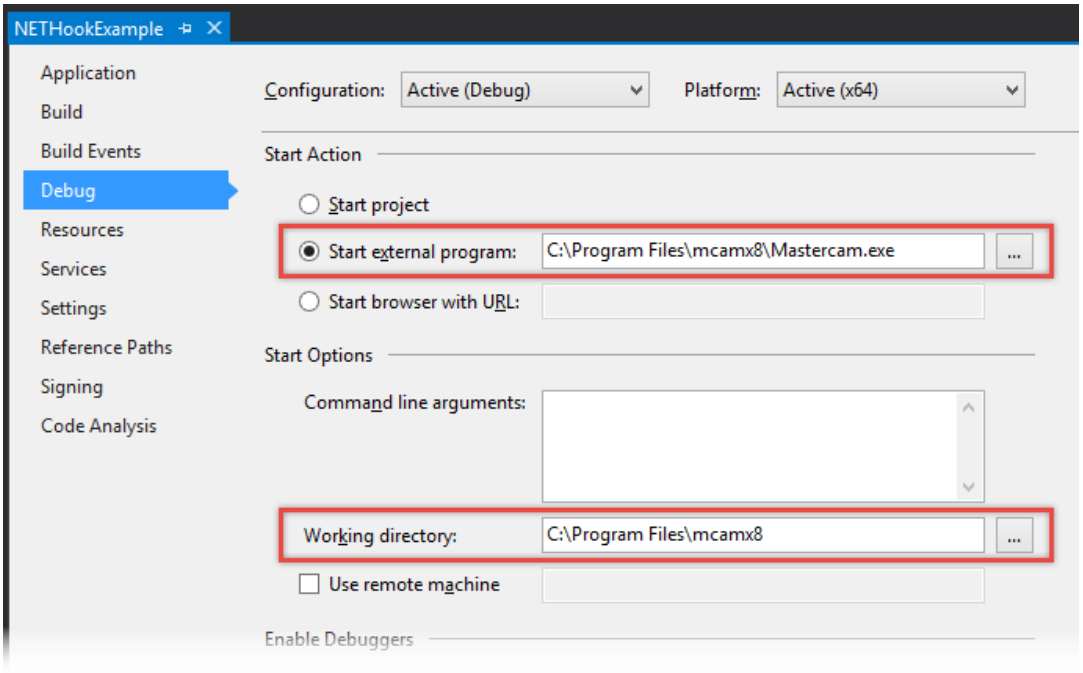
7. In the **Reference Manager** dialog, ensure that **NETHook3_0.dll** is checked and click **OK**



The **NETHook3_0** reference should then appear in the **References** list without the warning symbol.



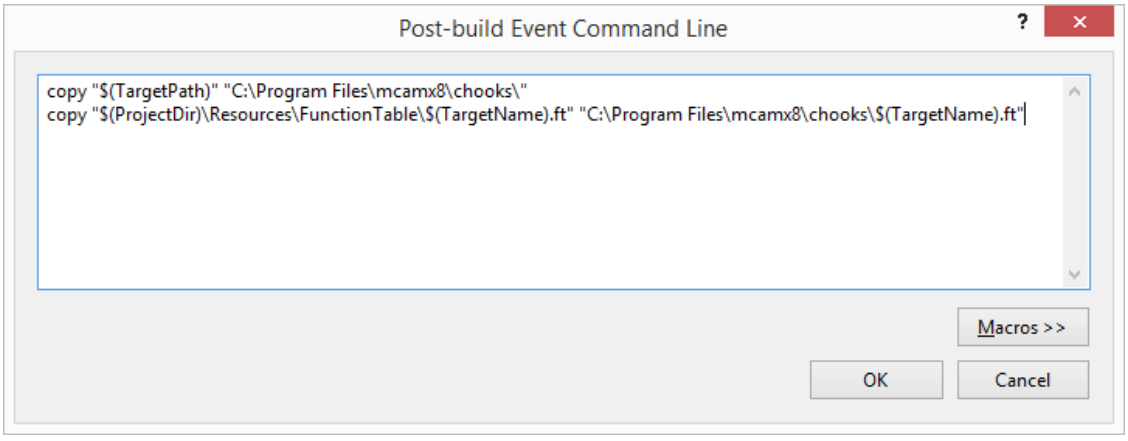
2. Set the project to start **Mastercam.exe** as an external program. To do this, go to **PROJECT** menu in Visual Studio and then select **Project Properties…** In the **Debug** properties section, use the browse button to set the **Start external program** property to the path to your **Mastercam.exe** (e.g., "C:\Program Files\mcamx8\Mastercam.exe"). Then do the same to set the **Working directory** property to the Mastercam installation folder (e.g., “C:\Program Files\mcamx8”) as shown below.



3. Add post-build events to copy the built NETHook **.dll** and **.ft** files to your Mastercam installation. To do this, go to **PROJECT** menu in Visual Studio and then select the **Project Properties…** (If the properties are not already open from the previous step). In the **Build Events** properties section, click the **Edit Post-build…** button then enter the following two lines into the **Post-build Event Command Line** field as shown below…

   copy "$(TargetPath)" "C:\Program Files\mcamx8\chooks\"
   copy "$(ProjectDir)\Resources\FunctionTable\$(TargetName).ft" "C:\Program Files\mcamx8\chooks\$(TargetName).ft"

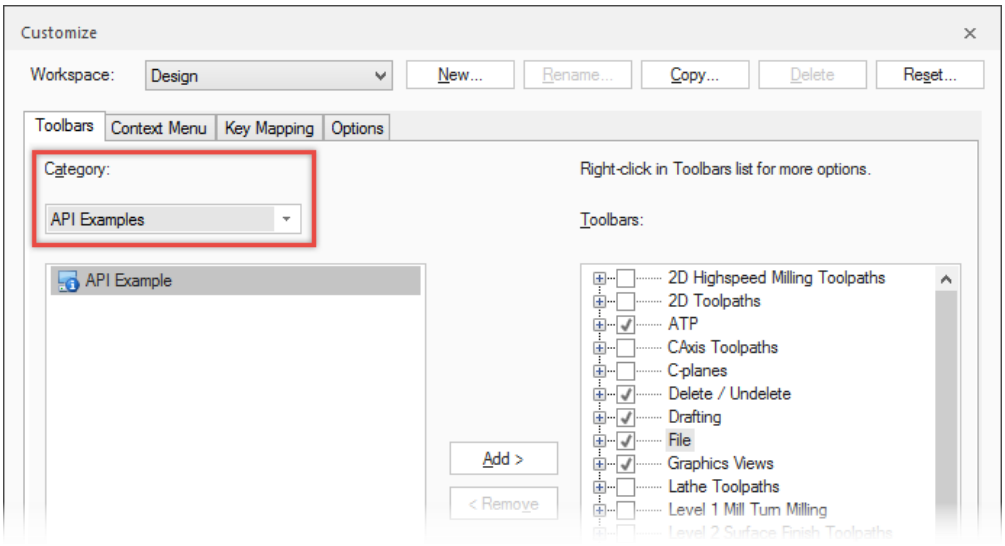
   Note that "*C:\Program Files\mcamx8"* is the path to your Mastercam installation folder and may vary.

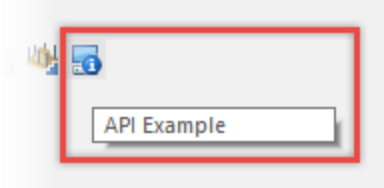


The entry point into the NETHook is the over-ridden **Run** method located in the **NETHookMain.cs** class. Set a break point there to step through the code when running the project in debug mode.

Adding Toolbar Button

1. *Copy the **.FT** file to the **chooks** folder per step **2** in the Mastercam File Setup section above. This will allow the NETHook command to be added to a toolbar.
2. Within Mastercam, go to the **SETTINGS** menu and then click **Customize**.
3. Select the category name specified in your FT file from the **Category** dropdown
4. Click the **Add** button to add it to an existing toolbar (e.g., **File**)





*If using the post build step the FT file should be automatically copied to your Mastercam path.