Setting Up Visual Studio

Tips, tricks, and techniques for setting up Visual Studio to work with Unreal Engine

Unreal Engine (UE) is designed to integrate smoothly with **Visual Studio** (VS), providing the means to quickly make code changes in your projects and immediately see results upon compilation. Setting up VS to work with UE can help improve developers' efficiency and overall user experience.

This document covers the basics for setting up your Unreal Engine-to-Visual Studio workflow.

Version Compatibility

The following table lists which versions of VS are integrated with the binary version of UE.

Unreal Engine Version	VS 2019 Version	VS 2022 Version
5.4	Not supported	17.4 or later, 17.8 recommended (Default)
5.3	16.11.5 or later	17.4 or later, 17.6 recommended (Default)
5.2	16.11.5 or later	17.4 or later (Default)

Unreal Engine Version	VS 2019 Version	VS 2022 Version
5.1	16.11.5 or later (Default)	17.4 or later

- As of UE 5.1, **Unreal Build Tool (UBT)** now generates the Visual Studio solution file for the latest version of Visual Studio installed, unless you have a Platform SDK installed that does not support the latest version. In this case, UBT generates the Visual Studio solution file for the latest version of Visual Studio that supports the Platform SDK in question.
- As of UE 5.2, VS 2022 is the default Visual Studio Version for compiling Unreal Engine.
- As of 5.4, VS 2019 is no longer supported.

Unreal Engine Prerequisite Installer

When installing UE from the **Epic Launcher** or if you clone it from **GitHub**, the UE prerequisite installer runs automatically. However, if you install or sync UE from **Perforce**, you must run the prerequisite installer before running any UE tools you have built locally. This installer is located at `UNREAL_ENGINE_ROOT\Engine\Extras\Redist\en-us\` in the code base.

New Visual Studio Installation

If you are installing VS for the first time, ensure you have the following options enabled.

Visual Studio Workloads

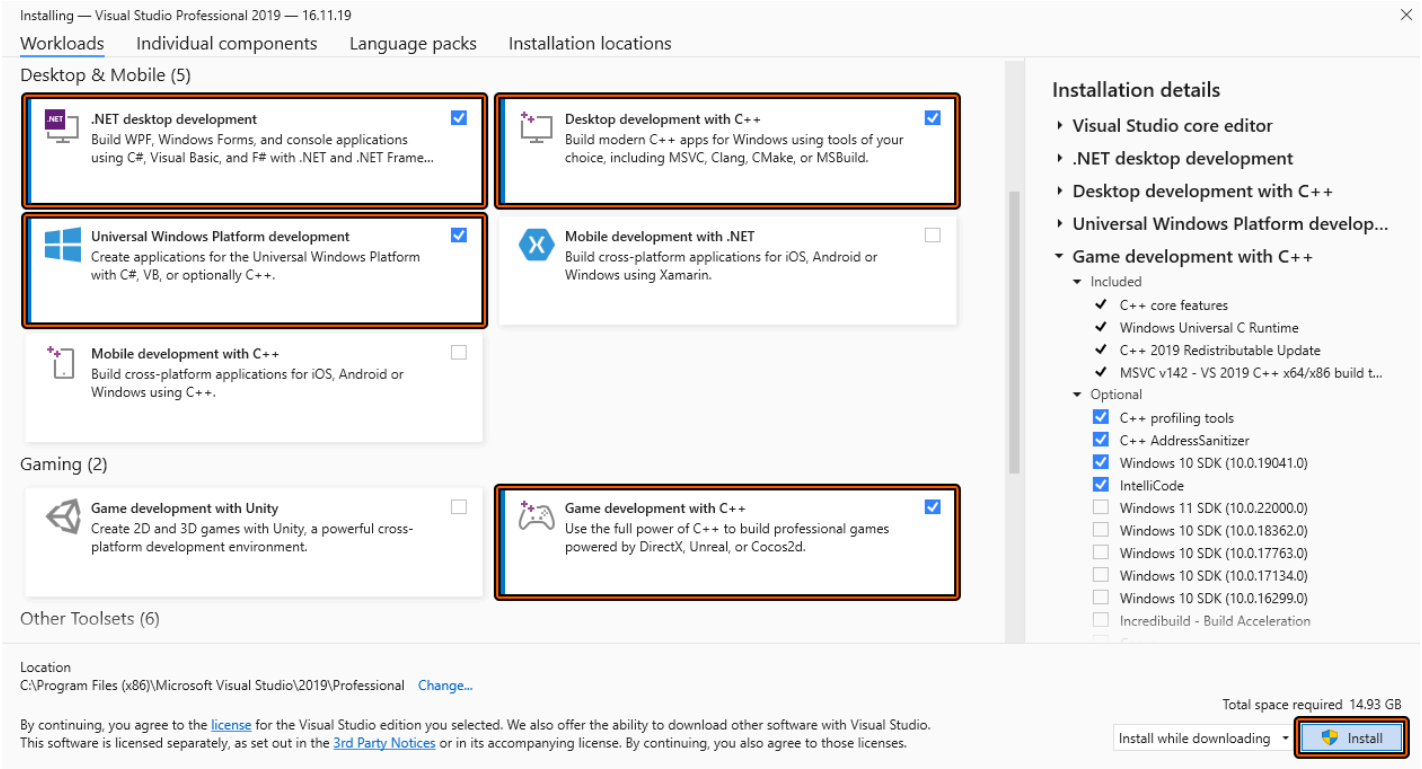
Unreal Engine development with VS requires installing the following optional **Workloads**:

- .NET desktop development
- Desktop development with C++
- Universal Windows Platform development
- Game development with C++

C++ Tools

To add C++ tools to your VS installation, select **Game development with C++** under **Workloads**, as well as these additional options.

- C++ profiling tools
- C++ AddressSanitizer
- Windows 10 SDK (10.0.18362 or Newer)
- Unreal Engine installer



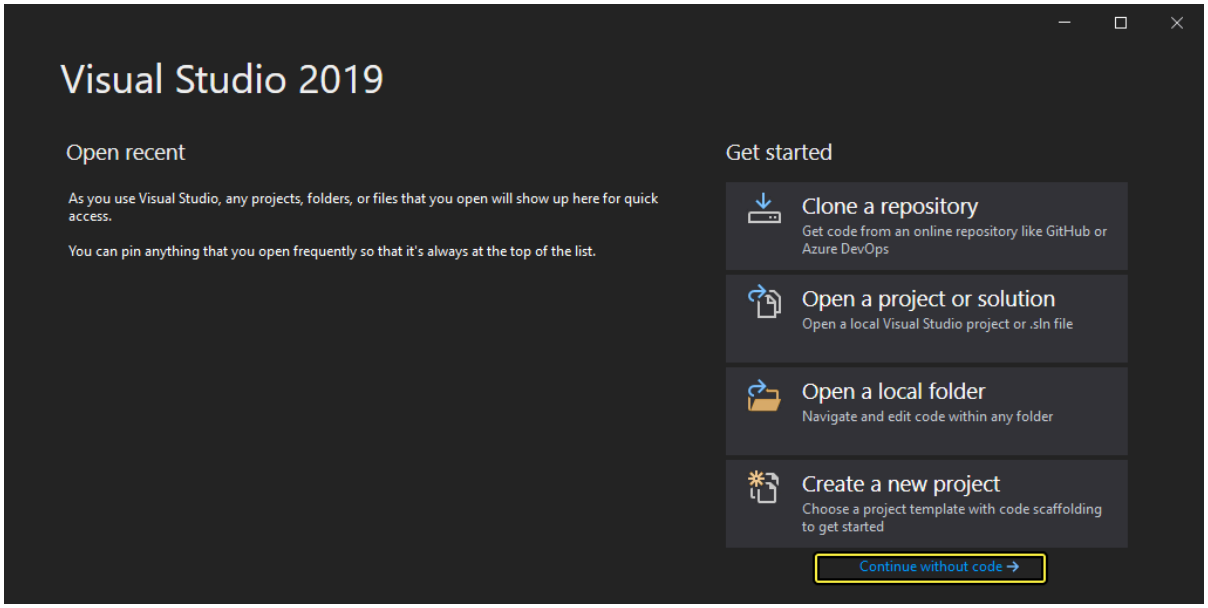
Recommended Settings

The following settings are recommended for developers using VS with UE.

If the version of VS below looks a little different, it is because the theme was changed to **Dark**. You can do this by going to **Tools > Options > Environment > General > Color theme.**

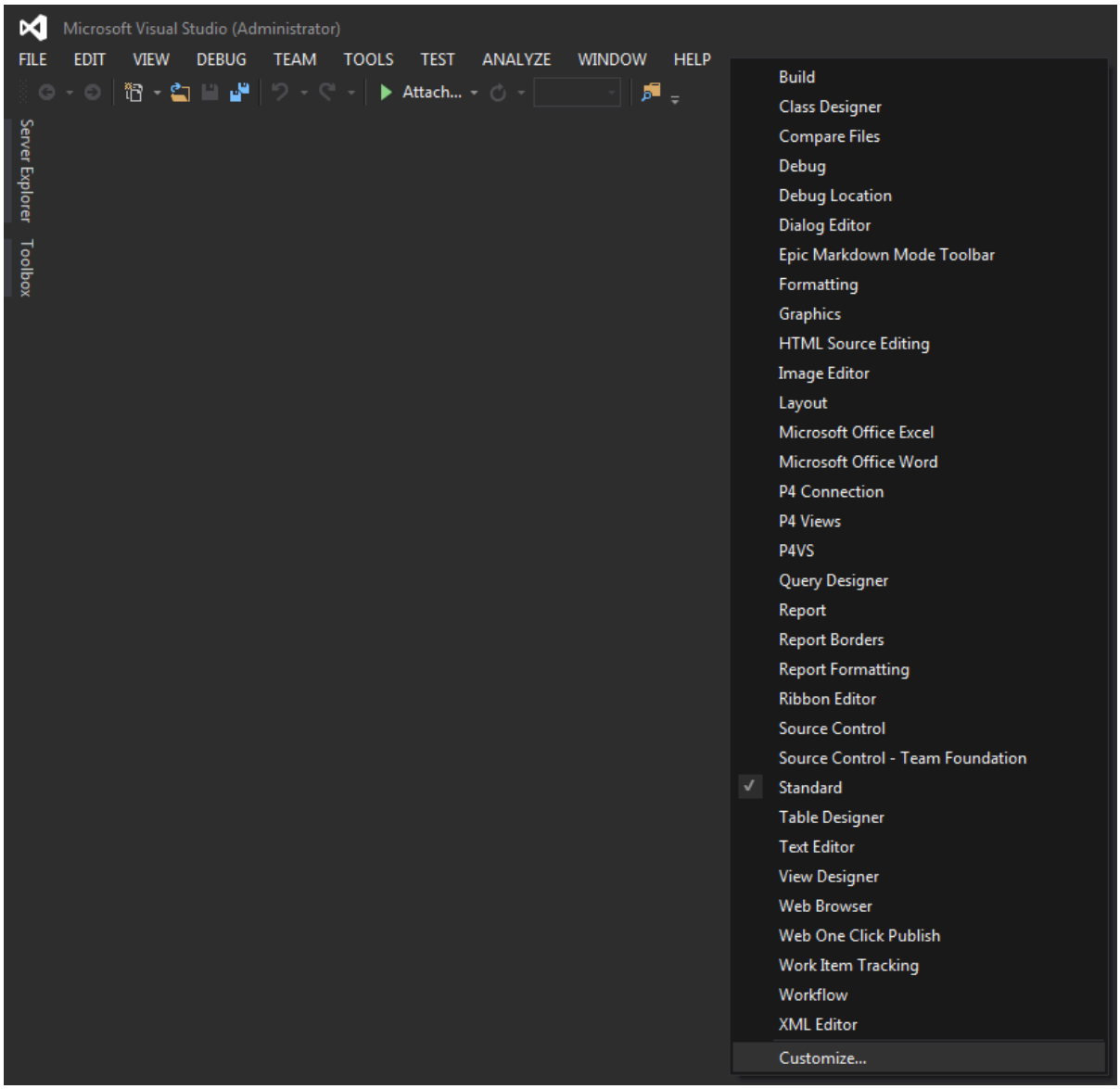
Increase the Width of Solution Configurations Dropdown Menu

1. Launch VS. If you open VS for the first time **Get Started** window appears. Click **Continue without code**.



Click to enlarge image.

2. Right-click the toolbar and select **Customize** at the bottom of the menu that appears.



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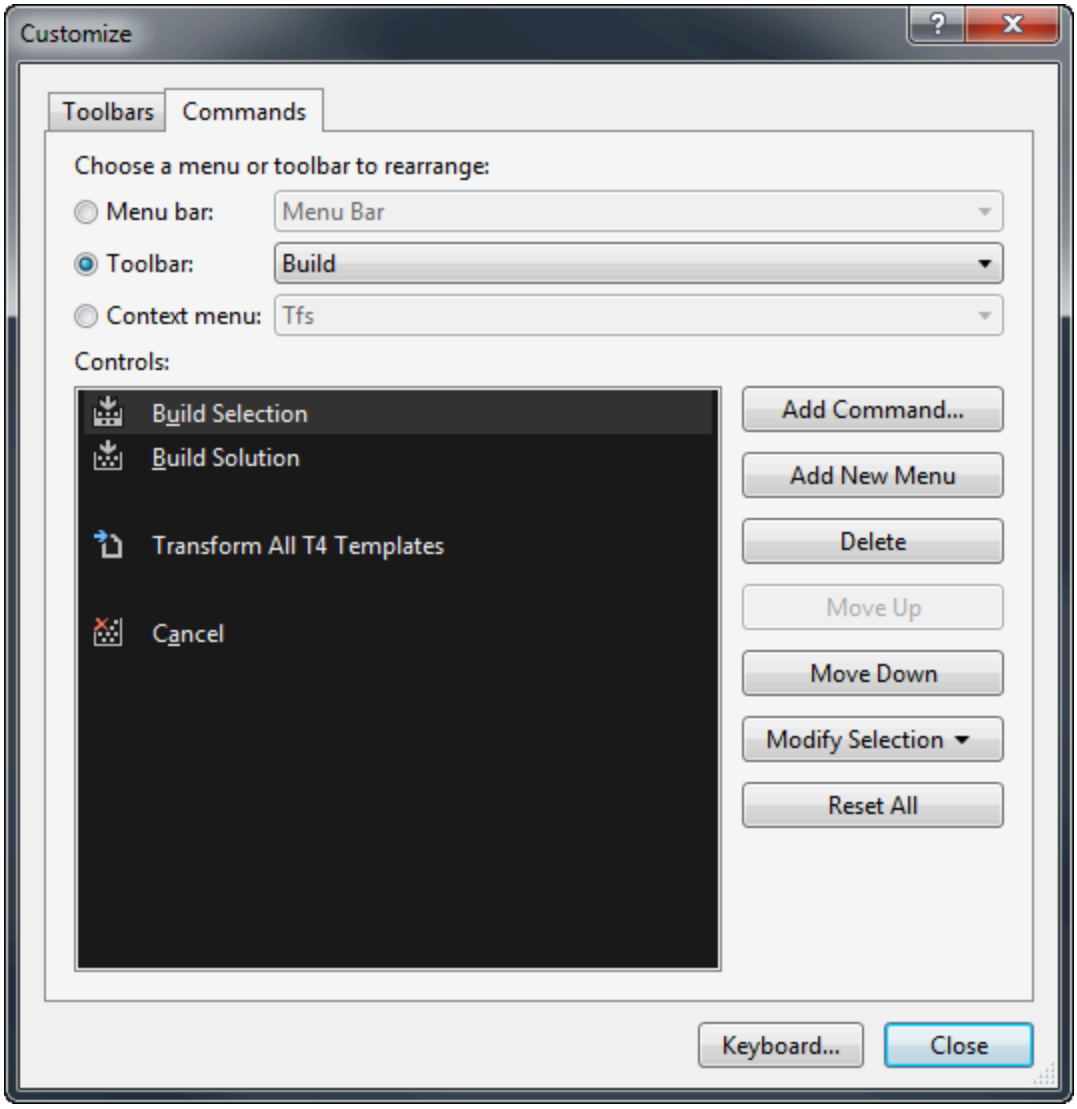
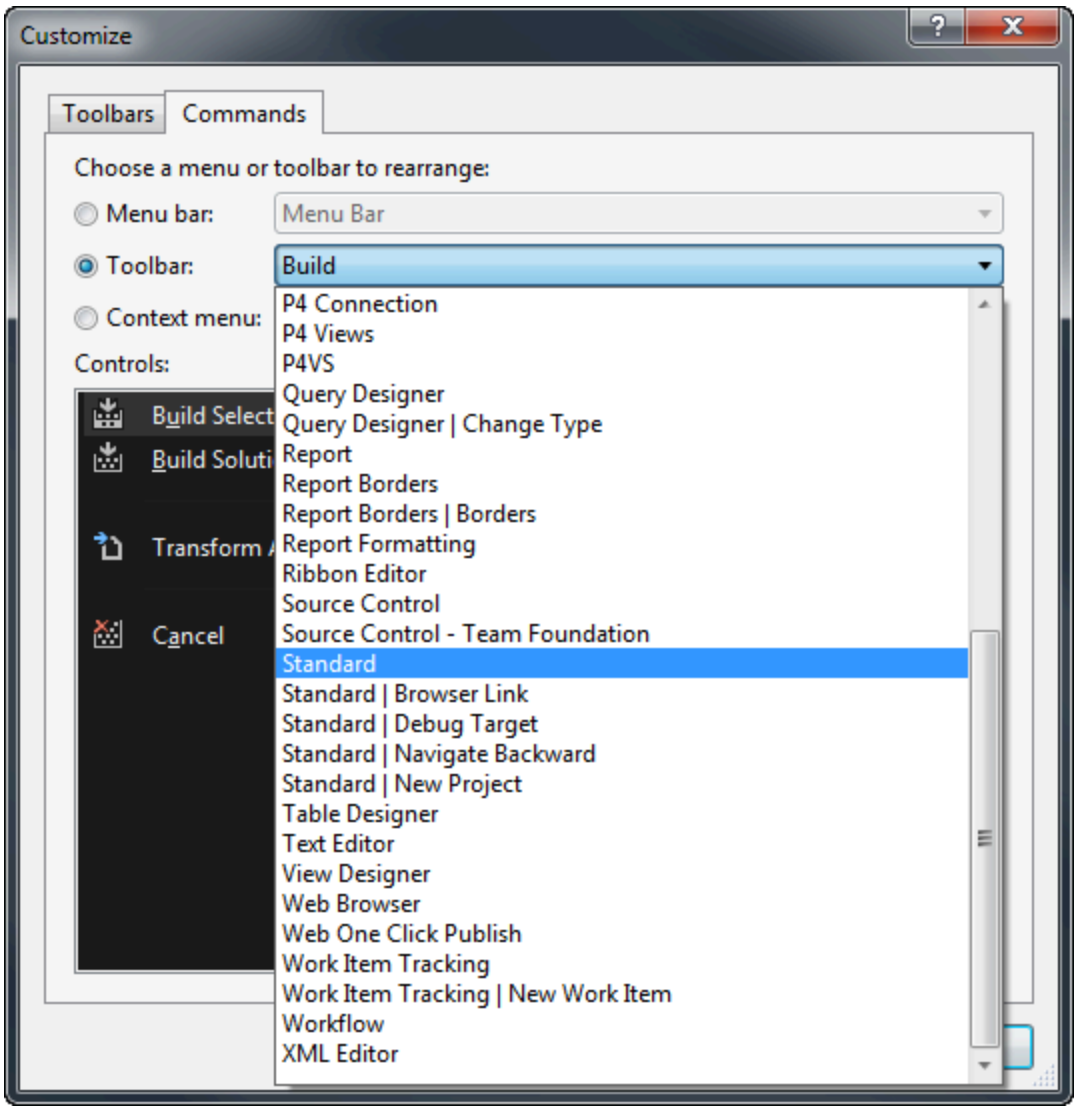
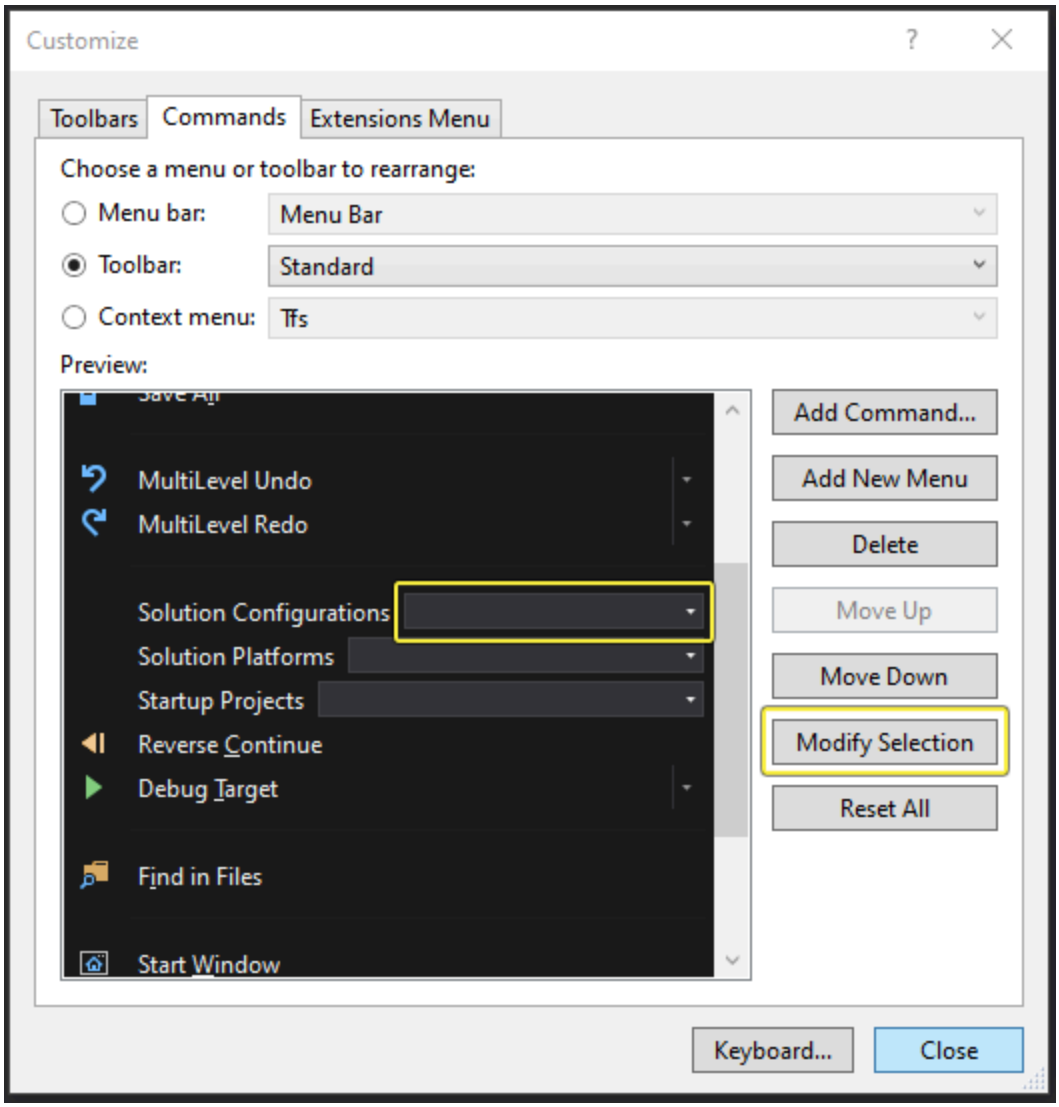
3. Click the **Commands** tab and select the **Toolbar** radio button.



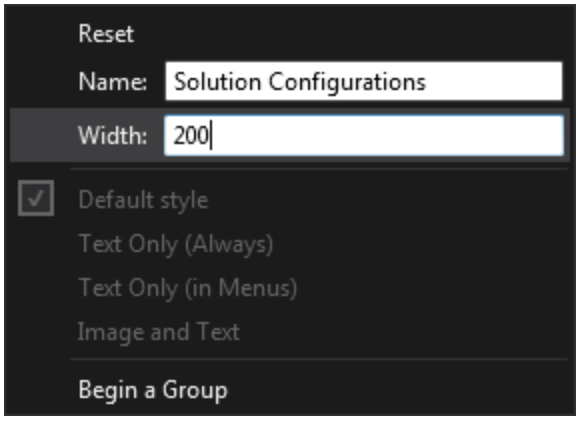
4. In the dropdown next to the **Toolbar**, choose **Standard.**



5. In the **Preview** list, select the **Solution Configurations** control (you may need to scroll down), then click **Modify Selection.**



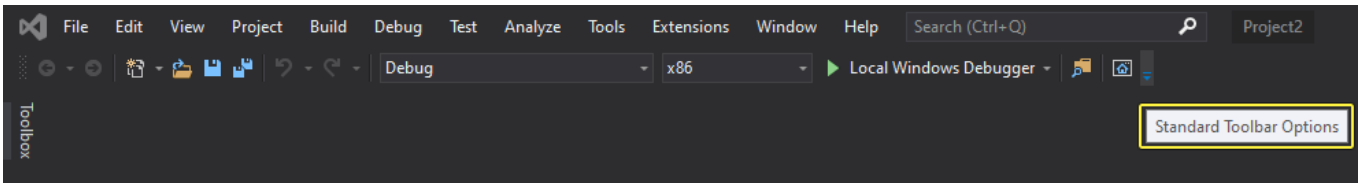
6. Set the **Width** to **200**, then click **OK**.



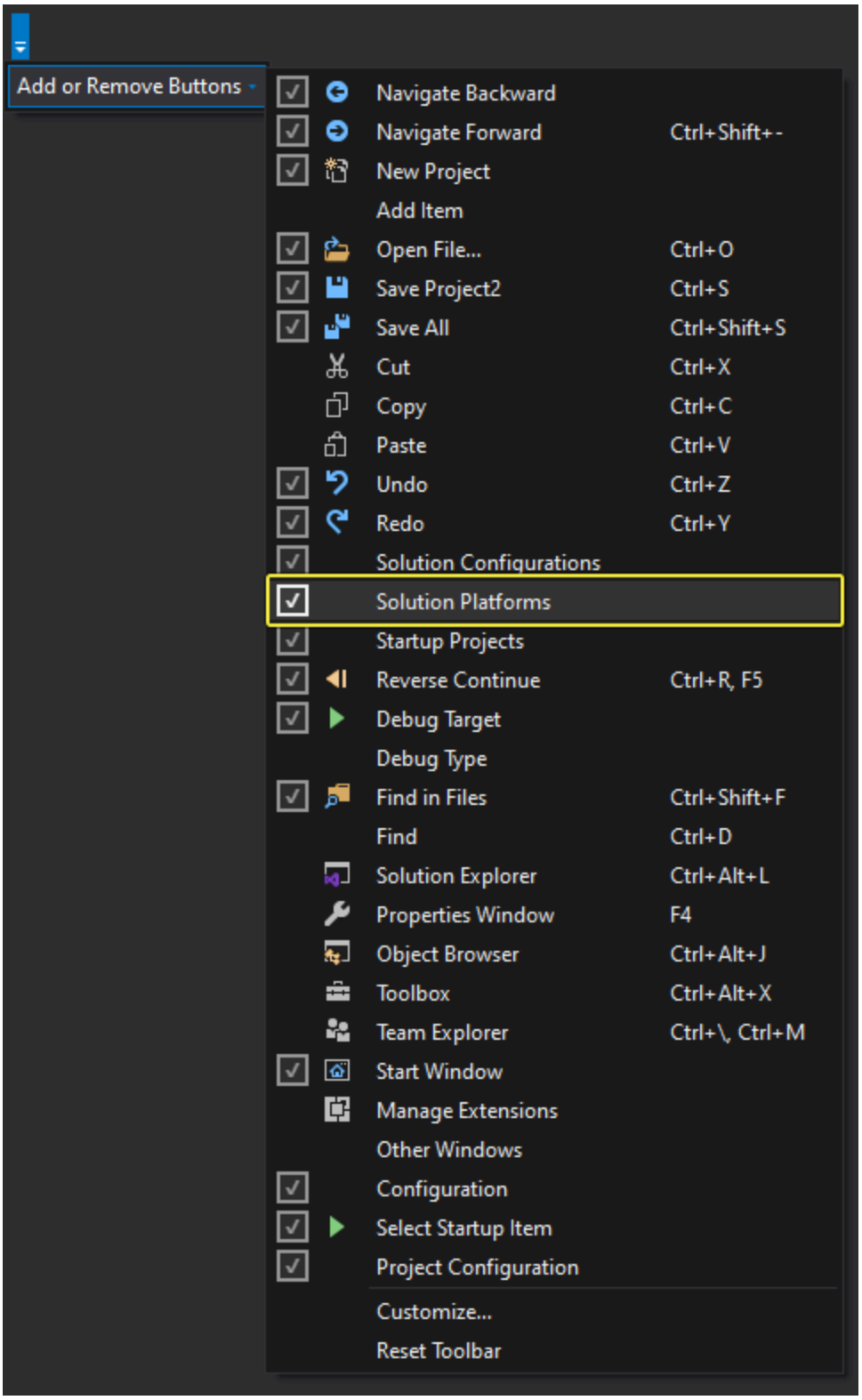
7. Click **Close** on the **Customization** . Your toolbar should update immediately.

Add the Solution Platforms Dropdown

1. Locate the far right button on the **Standard** toolbar (if you hover the mouse over it, it is labeled **Standard Toolbar Options**).



2. Click the dropdown button, choose **Add or Remove Buttons**, then click on **Solution Platforms** to add the menu to the toolbar (this may be enabled by default).

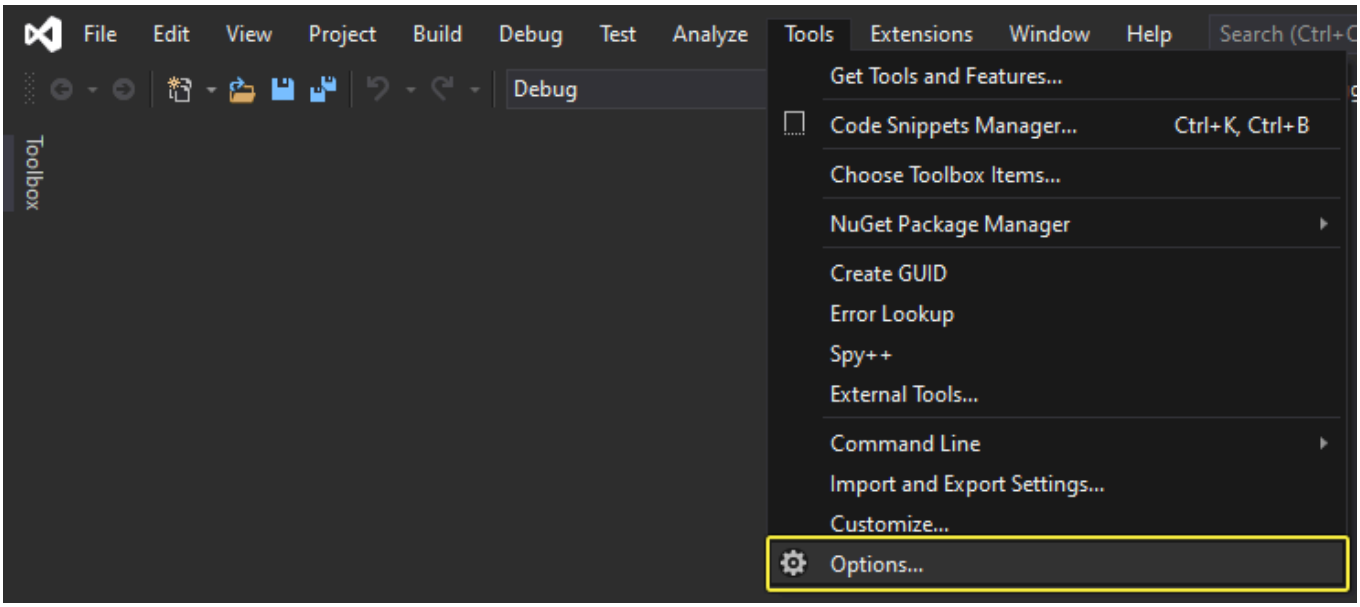


Turn Off the Error List Window

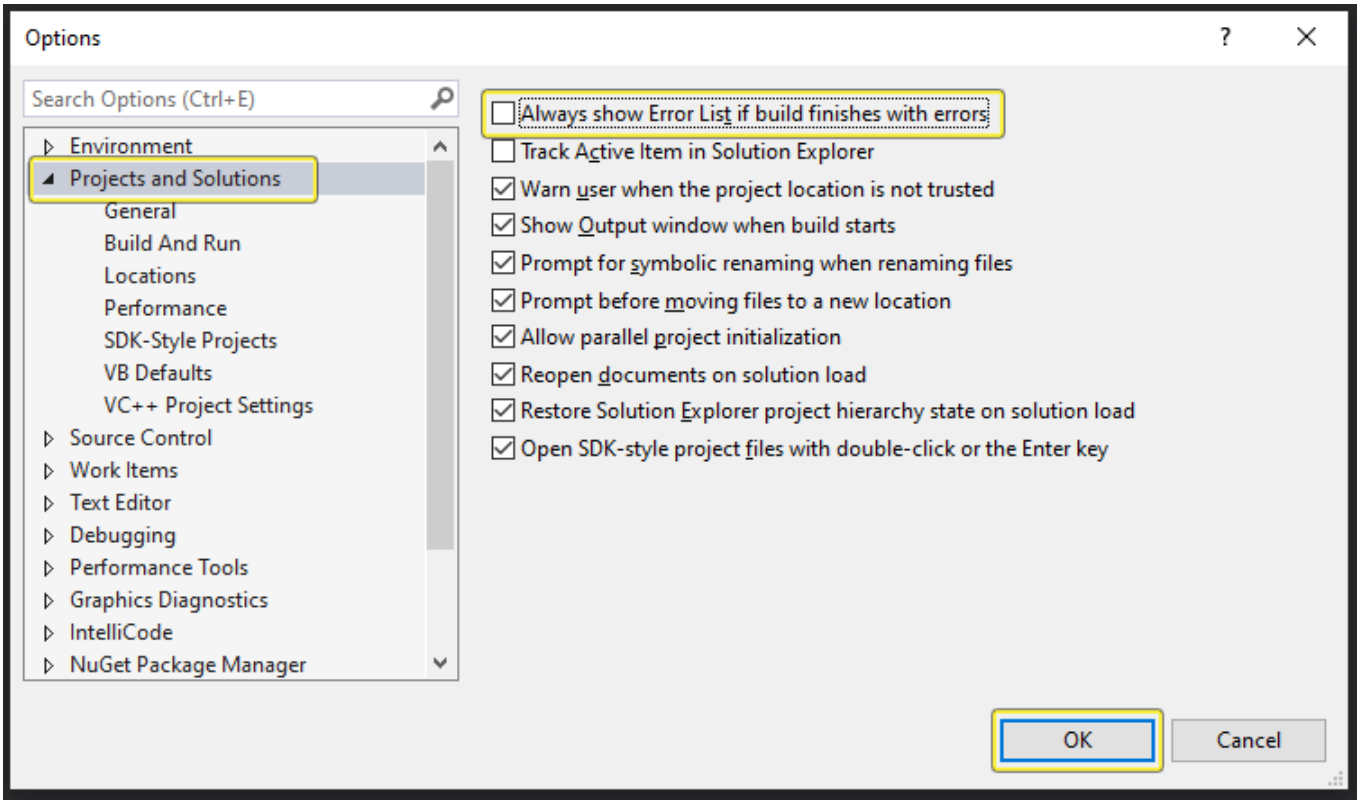
Typically, the **Error List** window pops up automatically when you have an error in your code. However, when working with UE, the Error List window can display false error information. It's

best to disable the Error List window and use the **Output** window to see real code errors when working with UE. The following steps show how to turn off the Error List window.

1. Close the **Error List** window if it is open.
2. From the **Tools** menu, open the **Options** dialog.



3. Select **Projects and Solutions** and disable **Always show Error List if build finishes with error**.



4. Click **OK**.

Here are some other configuration settings you might find useful:

- Turn off **Show Inactive Blocks**. If you do not, chunks of code may appear grayed out in the text editor. Go to **Tools > Options > Text Editor > C/C++ > View** to turn off this setting.

- Set **Disable External Dependencies Folders** to **True** to hide unneeded folders in the **Solution Explorer**. Find **Disable External Dependencies Folder** in **Tools > Options > Text Editor > C/C++ > Advanced**.
- Turn off **Edit & Continue** features; you do not need them. Go to **Tools > Options > Debugging > Edit and Continue**.
- Turn on **IntelliSense**.