How to Build DDAddin

2018-03-25, DDAddin Version 2.0.4

This document describes, how to build your own DDAddin version based on the sources supplied with the OEM license.

Content

1 Requirements

- Microsoft Visual Studio 2017, C++ Projects.
- Microsoft Visual Studio 2017 Installer Projects, https://marketplace.visualstudio.com/items?itemName=VisualStudioProductTeam.MicrosoftVisualStudio2017InstallerProjects

2 Download Source Code

In your order fulfillment mail, a link is supplied from where you can download the ZIP archive that contains all sources of DDAddin.

- Download the ZIP and extract it into a working directory. We refer to this directory as “InstDir”.

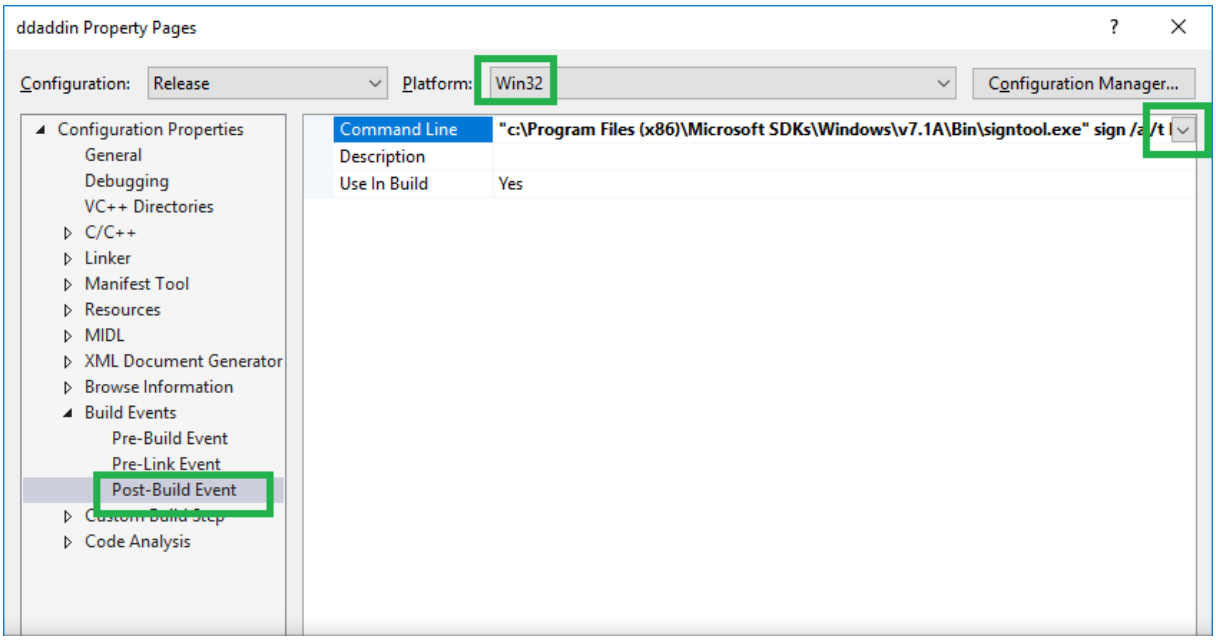
3 Compile 32bit DLL

- Open Visual Studio solution InstDir/ddaddin32.sln.
- Three projects are listed in Solution Explorer:

- ddaddin: COM Add-in DLL that is loaded by Outlook to enabled D&D to web pages.
- TestDDAddin: Test application which can be used to install and uninstall DDAddin.
- MergeModule32: Merge Module used to build an MSM file which contains the setup steps for DDAddin and is referred by the setup project introduced later.

3.1 Adapt Build Step for Digitally Sign the DLL

- In Solution Explorer window, right-click on project “ddaddin” and select “Properties”.
- Remove or adapt the “Post Build Event” that calls “signtool” to digitally sign the DLL.



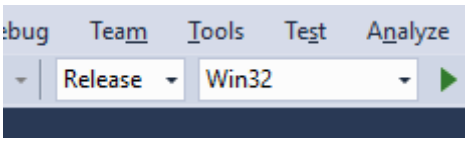
- Repeat the previous step for “Platform x64”.

3.2 Enter License Key in Build.cpp

- Open file “InstDir/Build.cpp”
- Replace
  ```
  wstring DDADDIN_LICENSE = L"DEMO";
  ```
- By your license:
  ```
  wstring DDADDIN_LICENSE = L"your license key";
  ```

3.3 Compile

- Set solution configuration and platform to Release/Win32:



- From Visual Studio menu bar, select “Build – Build Solution”.
- Close Visual Studio
- The artifacts built from Visual Studio can be found in InstDir/Release_86.

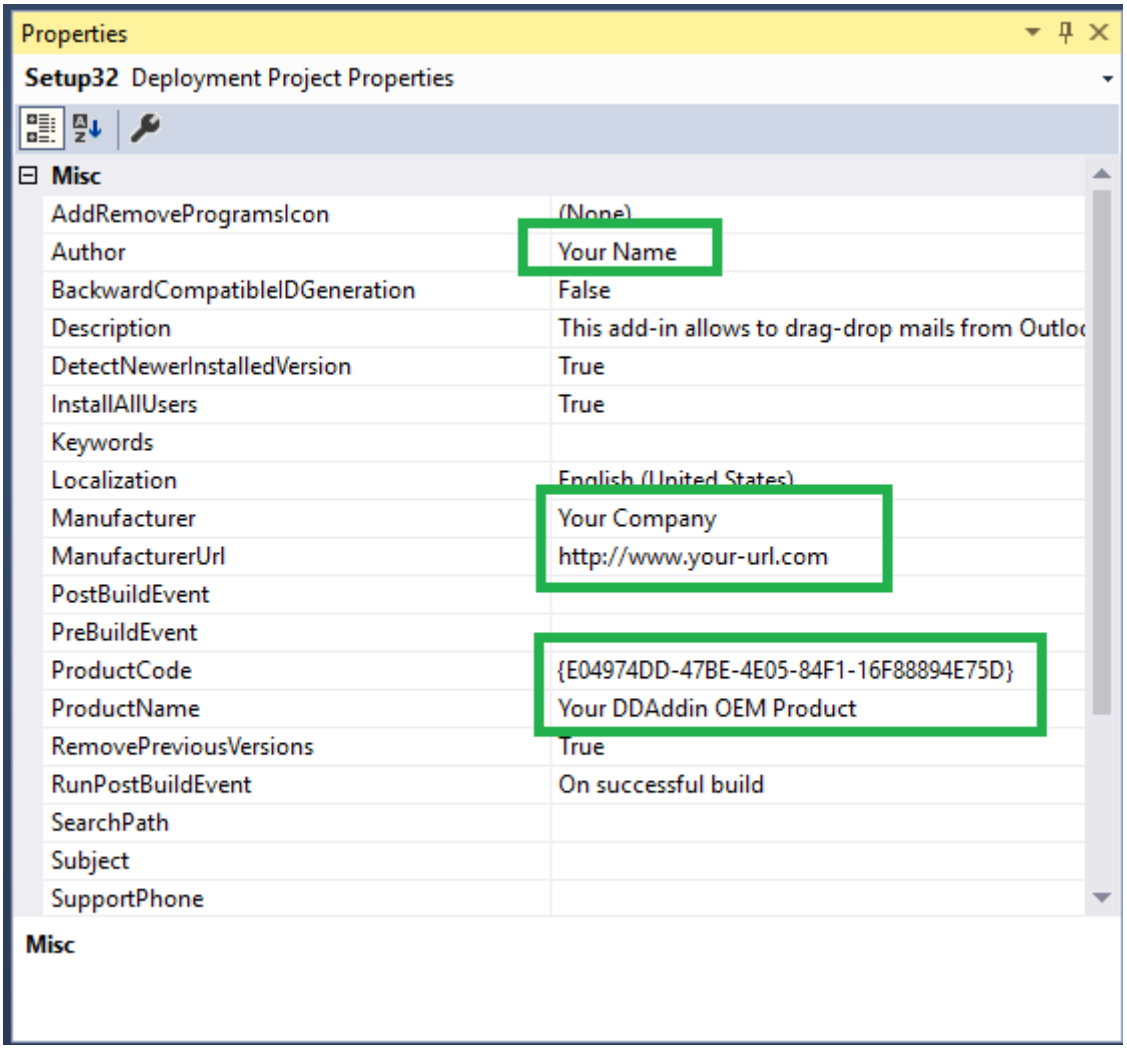
4 Compile 64bit DLL

- As a requirement, the section 3 has to be completed.
- Open Visual Studio solution ddaddin64.sln
- Set solution configuration and platform to Release/x64
- From Visual Studio menu bar, select “Build – Build Solution”.

- Close Visual Studio
- The artifacts built from Visual Studio can be found in InstDir/Release_64.

5 Compile Setups

- Open Visual Studio Solution InstDir/Setup/OEM/oem.sln
- Adapt properties of Setup32 and Setup64 projects:



- Set solution configuration and platform to Release/Default
- From Visual Studio menu bar, select “Build – Build Solution”.
- Close Visual Studio
- The artifacts built from Visual Studio can be found in InstDir/Setup/OEM/Setup32/Release and InstDir/Setup/OEM/Setup64/Release.
- Digitally sign the artifacts with your certificate.

6 Install

Uninstall DDAddin version from WILUTIONS, if there is installed one – the DEMO version might be installed.

On Windows 32bit, install InstDir/Setup/OEM/Setup32/Release/ddaddin32.msi.

On Windows 64bit, install InstDir/Setup/OEM/Setup64/Release/ddaddin64.msi. This setup includes the COM DLLs for Outlook 32bit and Outlook 64bit.

7 Debugging

7.1 Detect Outlook Bitness

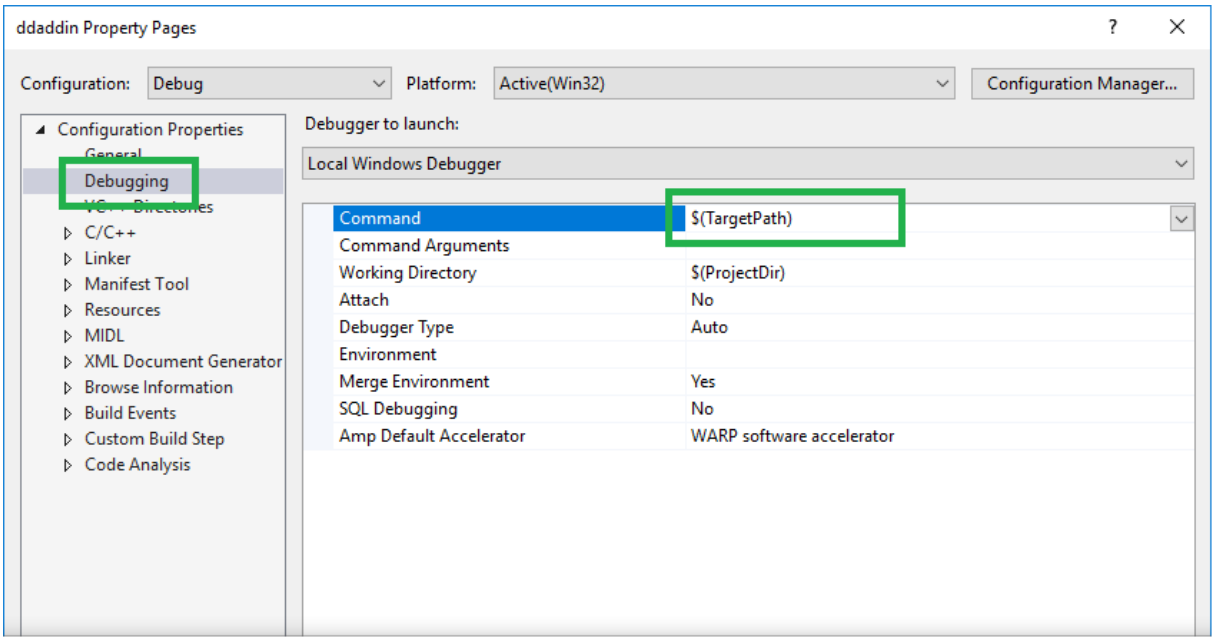
- Detect the Bitness of your Outlook installation, e.g. see https://stackoverflow.com/questions/2203980/detect-whether-office-is-32bit-or-64bit-via-the-registry
- For Outlook 32bit, use ddaddin32.sln in the following sections.
- For Outlook 64bit, use ddaddin64.sln in the following sections.

7.2 Register Debug Artifact of DDAddin

- Start Visual Studio as Administrator.
- Load solution ddaddin32.sln resp. ddaddin64.sln.
- Set solution configuration and platform to Debug/Win32 resp. Debug/x64.
- In Solution Explorer, right-click on project “TestDDAddin” and select “Set as Startup Project”.
- Open file “CheckInstall.cpp”.
- Lookup line “… Uninstall(L""); …” and comment out this line.
- Start project “TestDDAddin” by “Debug – Start Debugging”.
- Close Visual Studio

7.3 Debug Outlook with DDAddin

- Open Visual Studio as Non-Administrator and load ddaddin32.sln resp. ddaddin64.sln.
- Set solution configuration and platform to Debug/Win32 resp. Debug/x64.
- In Solution Explorer, right-click on project “ddaddin” and select “Set as Startup Project”.
- In Solution Explorer, right-click on project “ddaddin” and select properties.
- Enter Outlook program file at:



e.g.: C:\Program Files %28x86%29\Microsoft Office\root\Office16\OUTLOOK.EXE

7.4 Possibly Interesting Lines when Debugging

7.4.1 Add-in Initialization

The Add-in class registered with outlook is CWIDragDropAddin, defined in files WIDragDropAddin.h/.cpp. The first function called by Outlook is OnConnection.

7.4.2 Drag&Drop Handling

Replacement of Drag&Drop functions is performed in HookDD::EnableDragDrop, see file HookDD.cpp.

When a drag-operation is started, function HookDD::MyDoDragDrop (file HookDD.cpp) is called. It invokes FileDrop::handleDataObject (FileDrop.cpp) to construct an IDataObject with file drop information.

At this point, only file names are created and packed into DDItem objects. The files are empty yet. If the dragged item is a mail (not an attachment), a MailItem object is created for the item. Mail properties are optionally read, formatted as JSON text, and saved as text entity into the IDataObject (see MailItem::toJson, MailToEml.cpp).

On drop, the program goes through MyDropSource::QueryContinueDrag (MyDataObject.cpp). If the operation is successful, the prepared file items are saved.