



This topic shows how to create an add-in using Visual C++ in Microsoft Visual Studio 2010 that adds a menu item to the context-sensitive and Tools menus of vaults in Windows Explorer. You must be familiar with the process of creating a C++ COM DLL in the development environment that you use.

### 1. Create the C++ project.

1. Start Microsoft Visual Studio 2010.
2. Select **File > New > Project > Visual C++ > ATL > ATL Project**.
3. Type the name of your project in **Name**.
4. Click **Browse** and navigate to the folder where to create your project.
5. Click **OK**.
6. If you intend on using MFC, select **Application Settings > Support MFC** in the ATL Project Wizard dialogMyAdd.
7. Click **Finish** to generate the project.

### 2. Modify the project's settings.

1. Right-click the project in Solution Explorer, and select **Add > Class**.
2. In the Add Class dialog, select **ATL > ATL Simple Object**.
3. Click **Add**.
4. Type **MyAddIn** in **Short name**.
5. Click **Next** and **Next**.
6. Select **Custom** in the Interface and **Both** in the Threading Model.
7. Click **Finish**.
8. Select **View > Class View** and expand your project in the Class View window.
9. Right-click **CMyAddIn** and select **Add > Implement Interface**.
10. Select **Project** and select the most recent SOLIDWORKS PDM Professional type library, **Edm.tlb**, from the **Available type libraries** list.  
  
**NOTE:** If the type library is not in the list, you must copy **Edm.tlb** from the API folder on the CD to *project\_path\project\_name\project\_name*. Then select **File**, browse to *project\_path\project\_name\project\_name*, and select **Edm.tlb**.
11. Select **IEdmAddIn5** in **Interfaces**.
12. Click the single right-arrow button to move **IEdmAddIn5** to **Implement Interfaces**, and click **Finish**.  
  
 Two new methods, **IEdmAddIn5::GetAddInInfo** and **IEdmAddIn5::OnCmd**, are added to your class.
13. Select **File > Save All**.

### 3. Implement IEdmAddIn5::GetAddInInfo by replacing STDMETHODCALLTYPE(GetAddInInfo) in **MyAddin.h** with the following code.

```
STDMETHOD(GetAddInInfo)(EdmAddInInfo * poInfo, IEdmVault5 * poVault, IEdmCmdMgr5 * poCmdMgr)
{
    //The AFX_MANAGE_STATE macro is needed for MFC applications but should not
    //be used for applications that are MFC-free
    AFX_MANAGE_STATE(AfxGetStaticModuleState());

    if (poInfo == NULL || poCmdMgr == NULL )
        return E_POINTER;

    //Return some information to the Properties dialog box
    poInfo->mbsAddInName= SysAllocString( L"My first add-in" );
    poInfo->mbsCompany = SysAllocString( L"The name of my company" );
    poInfo->mbsDescription= SysAllocString( L"This is a very nice add-in." );
    poInfo->mlAddInVersion = 1;

    //SOLIDWORKS PDM Professional 5.2 is required by this add-in
    poInfo->mlRequiredVersionMajor = 5;
    poInfo->mlRequiredVersionMinor= 2;

    //Add hooks and menu commands to SOLIDWORKS PDM Professional
    //Below is a menu command that appears in the Tools
    //and context-sensitive menus of a vault in Windows Explorer
    poCmdMgr->AddCmd( 1, bstr_t("My first menu command"), EdmMenu_Nothing, bstr_t(""),
    bstr_t(""), 0, 0 );

    return S_OK;
}
```

### 4. Implement IEdmAddIn5::OnCmd by replacing STDMETHODCALLTYPE(OnCmd) in **MyAddin.h** with the following code.

```
STDMETHOD(OnCmd)(EdmCmd * poCmd, SAFEARRAY * * ppoData)
{
    //The AFX_MANAGE_STATE macro is needed for MFC applications, but should not
    //be used for applications that are MFC-free
    AFX_MANAGE_STATE(AfxGetStaticModuleState());

    if (poCmd == NULL || ppoData == NULL)
        return E_POINTER;

    MessageBox((HWND)poCmd->mlParentWnd, L"Hello World!", L"SOLIDWORKS PDM
    Professional", MB_OK );

    return S_OK;
}
```

**NOTE:** If you copy the code from this topic and paste it into the IDE, delete any characters or spaces that offend the compiler. On a 64-bit computer, you must replace **L** with **bstr\_t()** for the strings in the MessageBox.

### 5. Specify the project configuration properties:

1. Right-click the project name in Solution Explorer and select **Properties**.
2. Select **Configuration Properties > General**.

Ensure that the properties are configured as:

- Output Directory: **\$(SolutionDir)\$(Platform)\\$(Configuration)\**
- Configuration Type: **Dynamic Library (.dll)**
- Use of MFC: **Use MFC in a Shared DLL**
- Use of ATL: **Dynamic Link to ATL**

- Character Set: **Use Unicode Character Set**

### 3. Select **Linker > General**.

Ensure Output File is:

- **\$(SolutionDir)\$(Platform)\\$(Configuration)\\$(TargetName)\$(TargetExt)**

### 4. Select **Linker > Input**.

Ensure that Module Definition File is **.\project\_name.def**.

### 5. Select **Linker > Embedded IDL**.

Ensure the properties are configured as follows:

- Type Library: **\$(SolutionDir)\$(Platform)\\$(Configuration)\\$(ProjectName).tlb**
- TypeLib Resource ID should be empty. Delete any characters appearing in this row.

### 6. Select **MIDL > General**.

Select the environment in the Target Environment dropdown that most closely matches your environment.

### 7. Select **MIDL > Output**.

Ensure the properties are configured as follows:

- Output Directory: **\$(SolutionDir)\$(Platform)\\$(Configuration)\**
- Type Library: **\$(IntDir)project\_name.tlb**

### 6. Click **OK**.

### 7. To change the project's type of configuration to **Release**:

1. In the Solution Explorer, right-click **Solution** '*project\_name*' and select **Configuration Manager**.
2. Click the down-arrow key in the project's Configuration column and select **Release**.
3. Click **Close**.

### 8. Save and compile the project for either x32 or x64 to create an add-in DLL that is compatible with your system.

**NOTE:** See [Using .NET Framework in Add-in Applications](#) if a problem occurs at runtime.

### 9. Add the new add-in, *project\_name.dll*, to the file vault:

1. Start up the SOLIDWORKS PDM Professional [Administration tool](#).
2. Expand the vault where you want to install this add-in. Log in, if prompted.
3. Right-click **Add-ins** and select **New Add-in**.

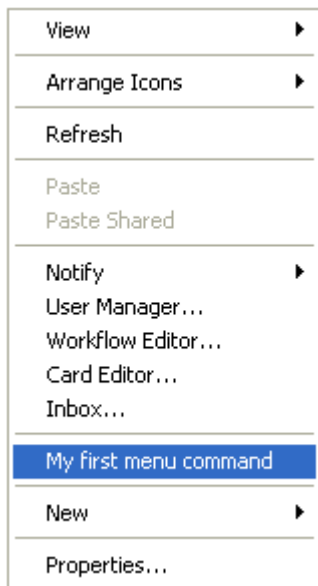
#### 4. Select:

- x32: *project\_path\project\_name\Release\project\_name.dll*, and click **Open**.
- x64: *project\_path\project\_name\x64\Release\project\_name.dll*, and click **Open**.

The add-in **Properties** dialog displays the add-in's name, company, add-in version, required version of SOLIDWORKS PDM Professional, package, and description.

#### 5. Click **OK**.

### 10. Right-click the list of vaults in Windows Explorer to show the context menu:



The new menu item appears in the context menu.

11. Select **My first menu command** on the context-sensitive menu.

12. A message box is displayed.

Use your new add-in to create [more advanced menu commands](#) or [add-in hooks](#) that allow you to check files in and out of the vault.