

# **Integration Objects'**

## **Toolkit for OPC UA Client Applications Development**

**OPC UA Client Toolkit**  
Version 2.0 Rev.1

## **QUICK USER GUIDE**

OPC UA Client Toolkit Quick User Guide Version 2.0 Rev 1  
Published August 2024  
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## ABOUT THIS USER GUIDE

This guide is a quick step by step guide on how to install, configure and run OPC UA Client Toolkit.

## INSTALLATION PRE-REQUISITES

In order to properly run any OPC UA Client developed using the OPC UA Client Toolkit, install the following software components on the target system:

- .NET Framework 4.6.1 or higher
- .Net Core 3.1 Runtime or higher

## INSTALLING OPC UA CLIENT TOOLKIT

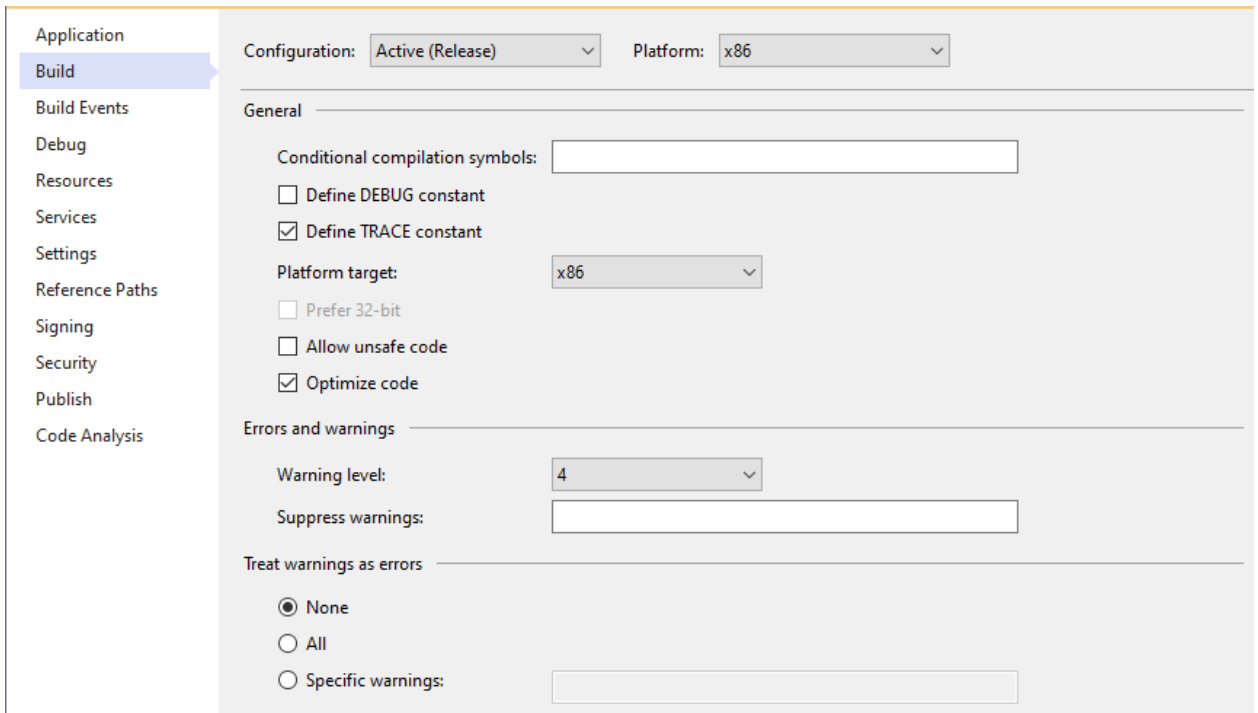
To install the OPC UA Client Toolkit, run the installation executable using an administrator account and the wizard will take you through the different installation steps.

If you are evaluating the OPC UA Client Toolkit, make sure to select demo version in the select features dialog. Otherwise, select full version. The evaluation license allows you to use the toolkit for 30 days and limits the runtime to 2 hours.

## COMPILING AND LINKING APPLICATIONS

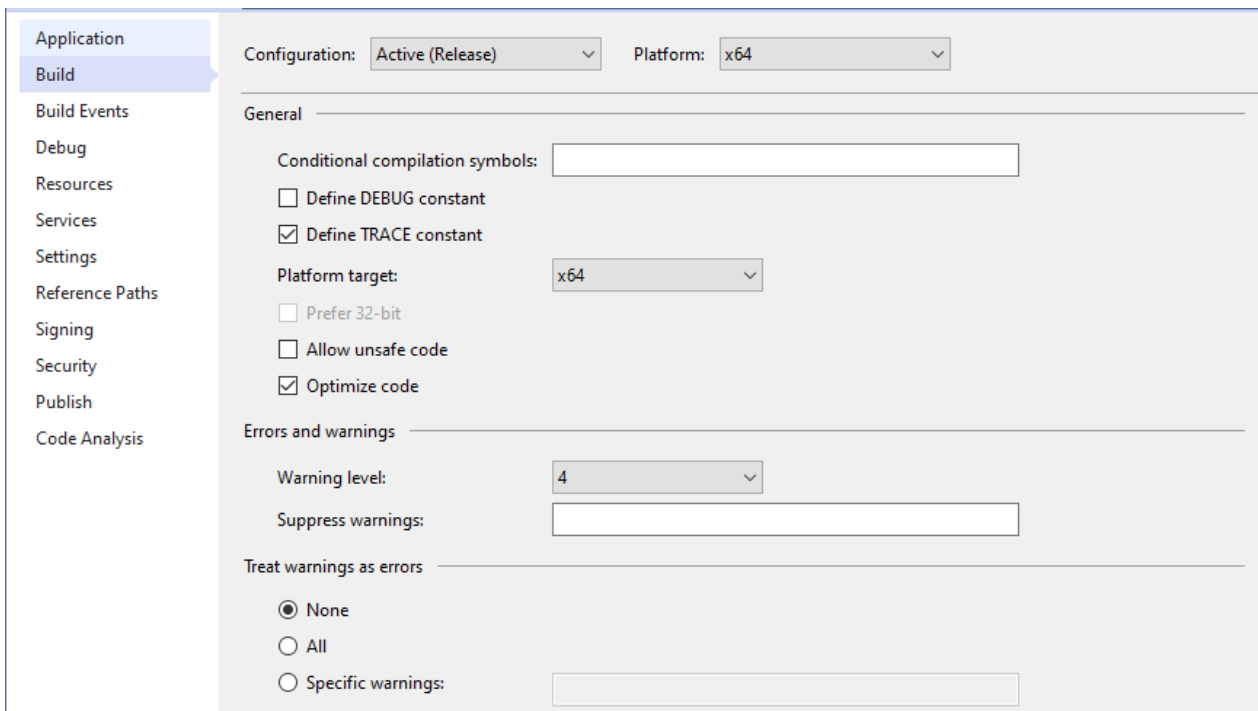
This section provides the steps on how to compile and correctly link applications to develop a custom OPC UA clients using Integration Objects' OPC UA Client Toolkit with Microsoft Visual Studio 2019.

For users who have to build the application in a **32-bit** machine, the target platform has to be **x86** as illustrated in the screenshot below.



**Figure 1: Platform Target for 32-bit Machine**

For users who have to build the application in a **64-bit** machine, the target platform has to be **Any CPU** as illustrated in the screenshot below.

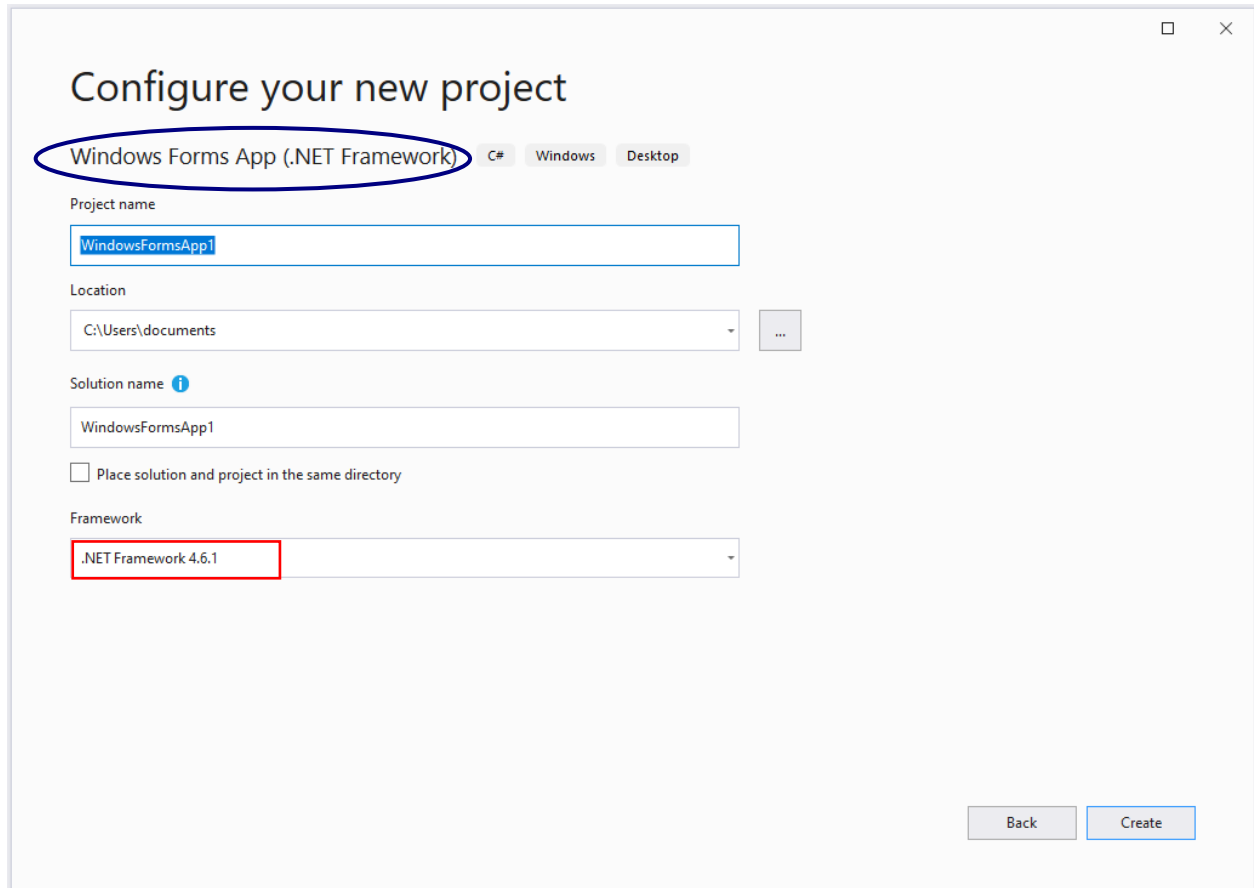


**Figure 2: Platform Target for 64-bit Machine**

- **WINDOWS FORM APPLICATIONS USING .NET FRAMEWORK:**

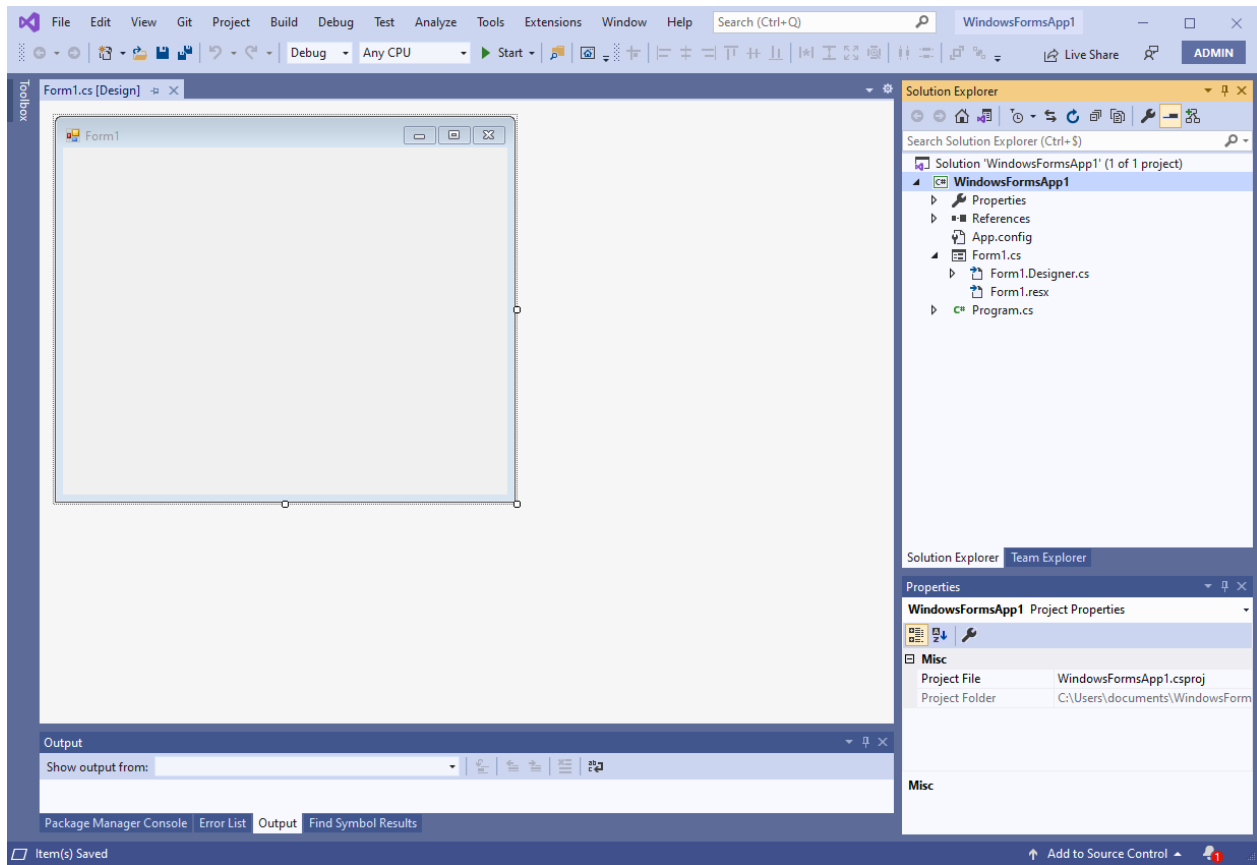
To build a .Net framework OPC UA Client application, follow the steps below:

1. Start Visual Studio 2019 and choose **New Project**. The following window will be displayed.



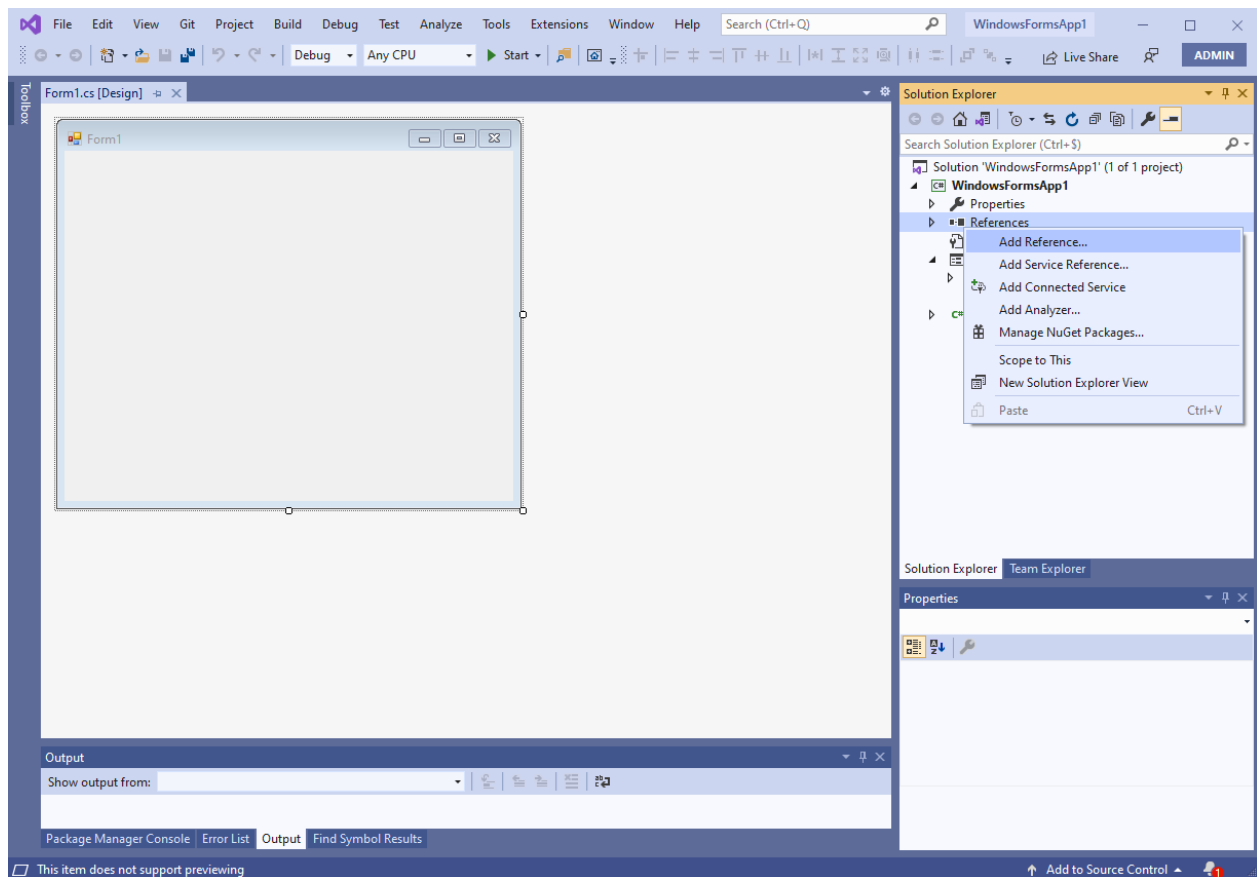
**Figure 3: New Windows Form Project**

2. Choose Visual C# **Windows Forms Application** Project and then click **OK**.  
A project named WindowsFormsApplication1 with a form called Form1 will be automatically created.



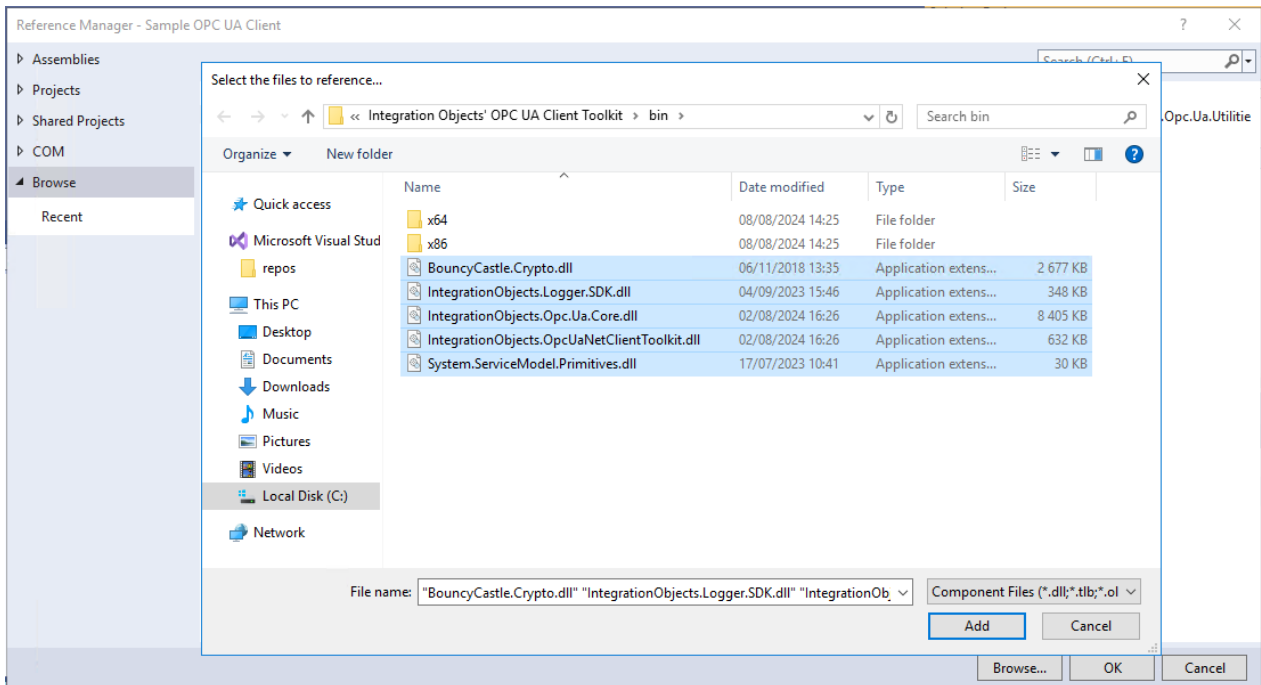
**Figure 4: Windows Forms Project Template**

3. Right click on References then click Add Reference... from the displayed menu.



**Figure 5: Solution Explorer**

4. Select Browse tab from the displayed Add Reference window.
  5. Select the following files located under “.:\\Program Files (x86)\\Integration Objects\\Integration Objects' OPC UA Client Toolkit\\bin”:
- IntegrationObjects.OpcUaNetClientToolkit.dll
  - IntegrationObjects.Opc.Ua.Core.dll
  - IntegrationObjects.Logger.SDK.dll
  - BouncyCastle.Crypto.dll
  - System.ServiceModel.Primitives.dll



**Figure 6: Choosing a Reference**

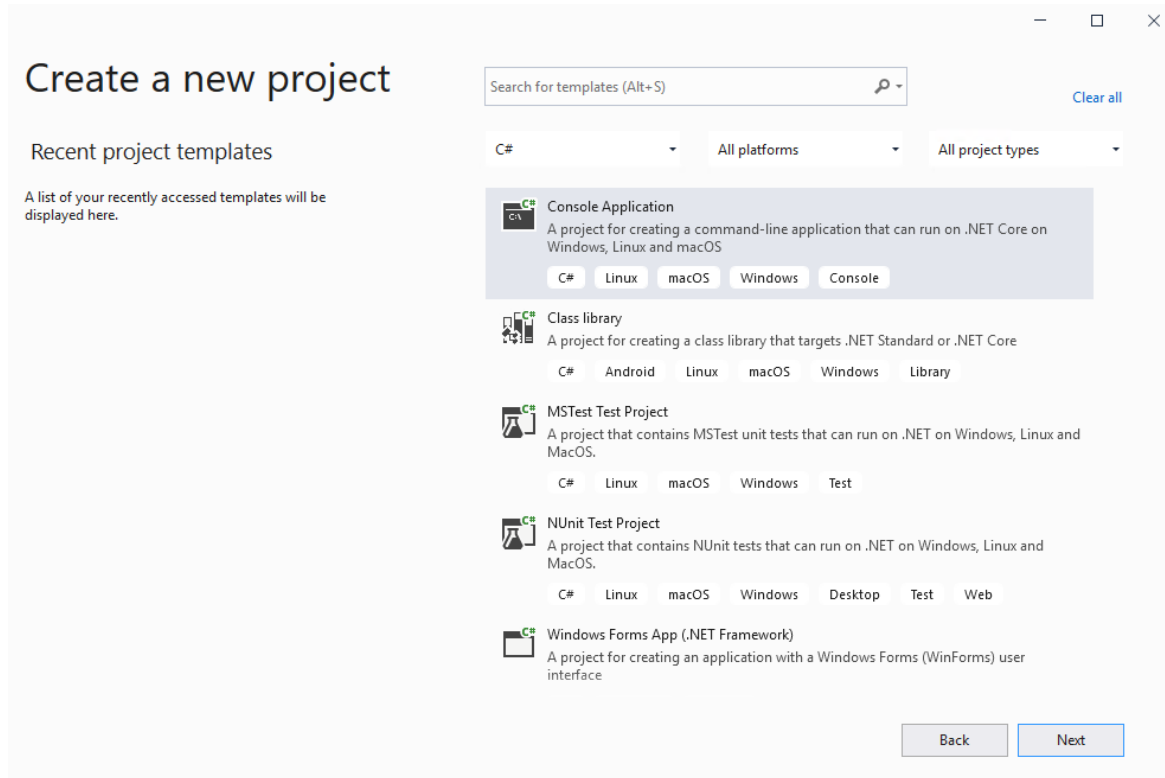
6. Copy the UA XML configuration file “XXXX.Config.xml” file located under “.:**Program Files (x86)\Integration Objects\Integration Objects' OPC UA Client Toolkit\bin**” and paste it in the output project.
7. Copy the “license.dll” file located under “.:**Program Files (x86)\Integration Objects\Integration Objects' OPC UA Client Toolkit\bin\x64**” and paste it in the output project.

Make sure to choose the “license.dll” file located under “.:**Program Files (x86)\Integration Objects\Integration Objects' OPC UA Client Toolkit\bin\x86**” if you are using the 32-bit version.

- **A CONSOLE APPLICATION USING .NET CORE:**

To build a .Net Core OPC UA Client application, follow the steps below:

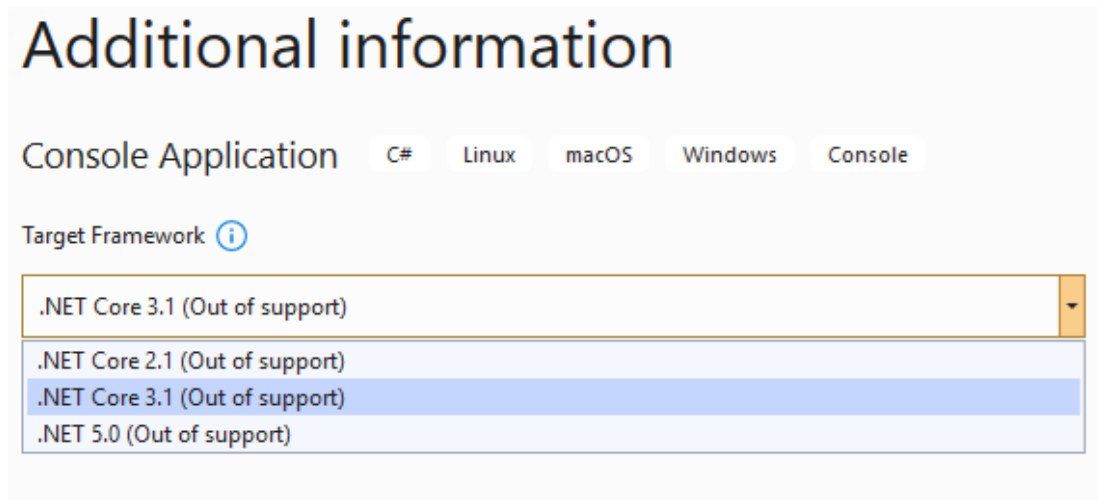
1. Start Visual Studio 2019 and choose **New Project**. The following window will be displayed.



**Figure 7: New Console Application Project**

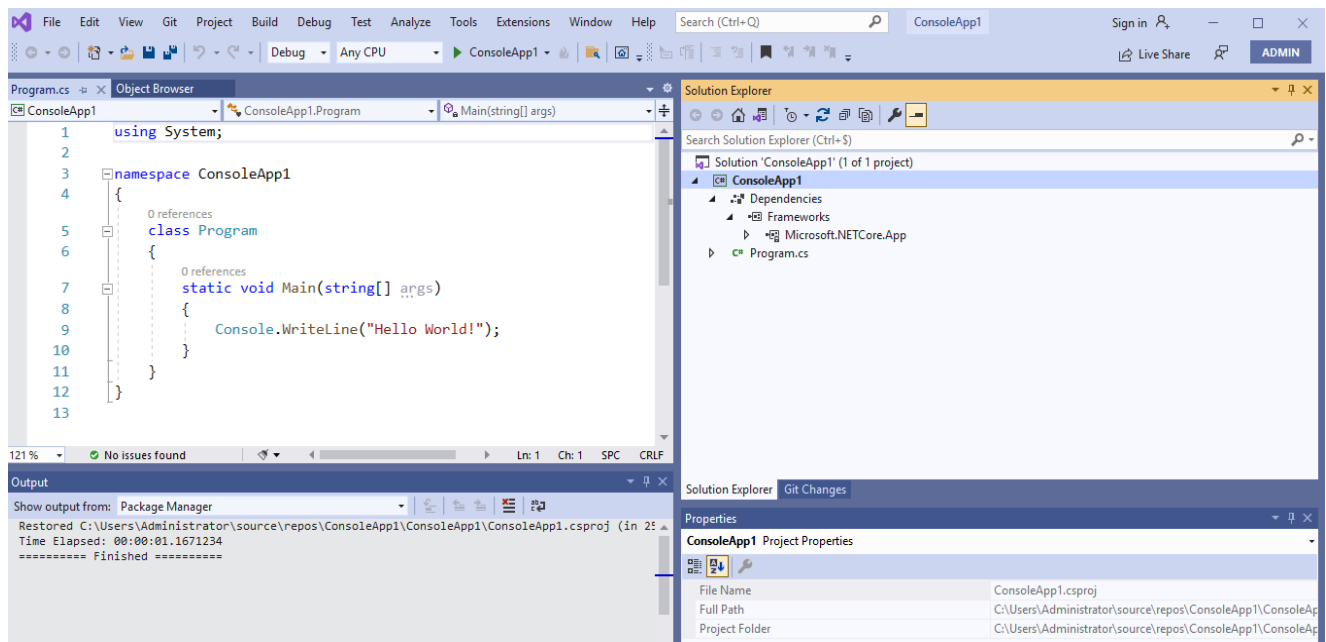
2. Choose Visual C# **Console Application** Project and then click **Next**.
3. From Additional information, select the .Net Core version you need to build with your application project and click Create.





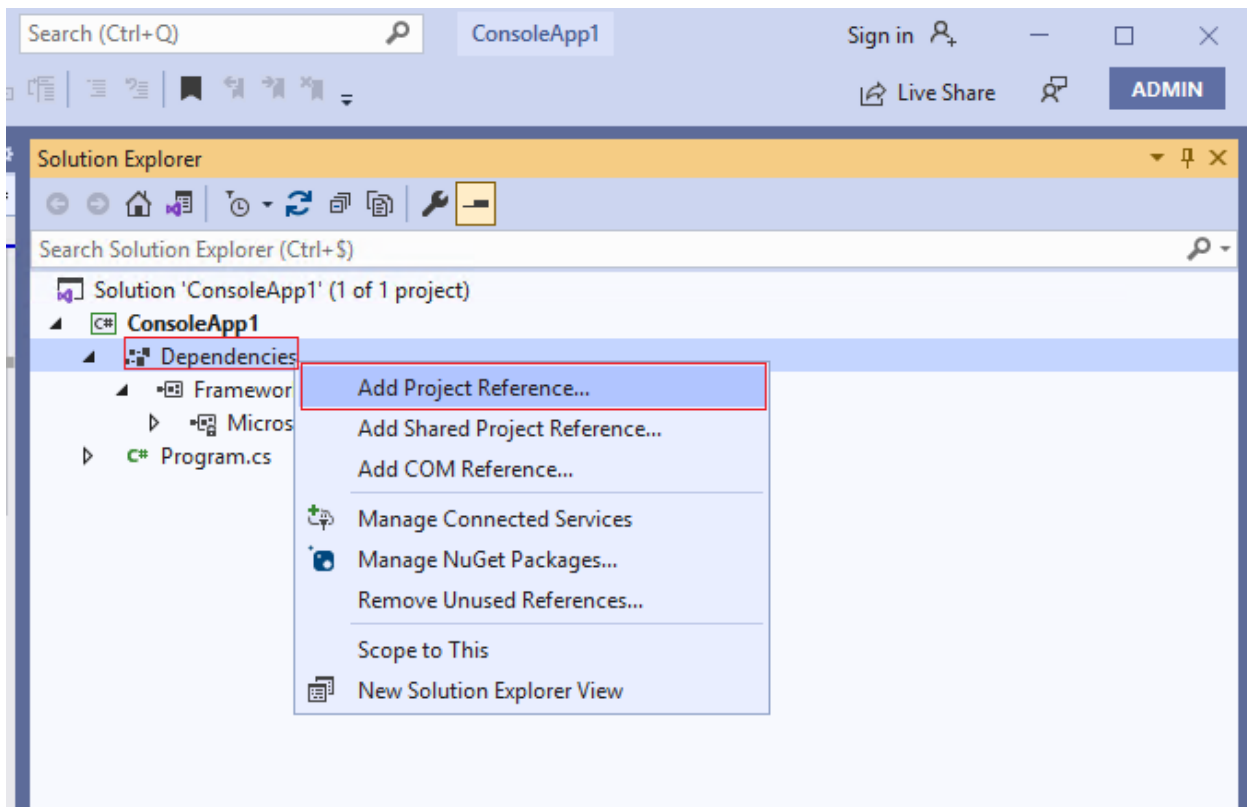
**Figure 8: New Console Application Project**

A project named ConsoleApp1 will be automatically created.



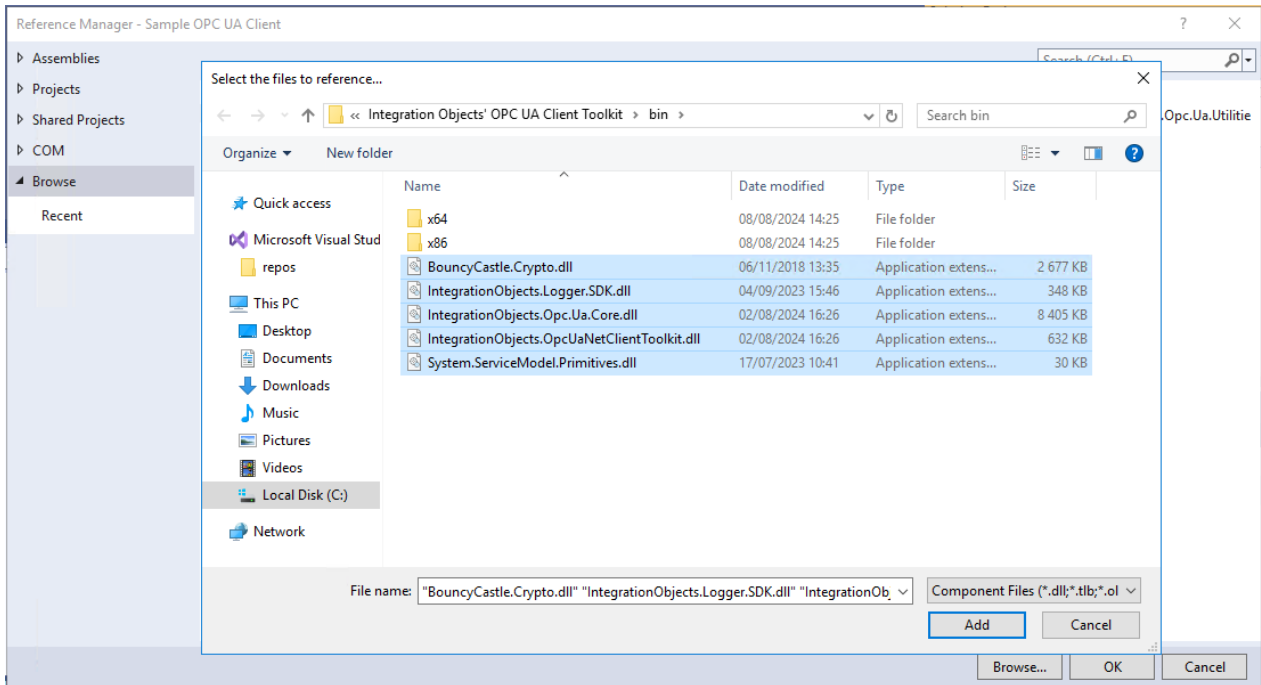
**Figure 9: Console Application Project Template**

4. Right click on **Dependencies** then click Add Project Reference... from the displayed menu.



**Figure 10: Solution Explorer**

5. Select Browse tab from the displayed Add Reference window.
6. Select the following files located under “**.\Program Files (x86)\Integration Objects\Integration Objects' OPC UA Client Toolkit\bin**”:
  - IntegrationObjects.OpcUaNetClientToolkit.dll
  - IntegrationObjects.Opc.Ua.Core.dll
  - IntegrationObjects.Logger.SDK.dll
  - BouncyCastle.Crypto.dll
  - System.ServiceModel.Primitives.dll



**Figure 11: Choosing a Reference**

7. Copy the UA XML configuration file "XXXX.Config.xml" file located under ".:\Program Files (x86)\Integration Objects\Integration Objects' OPC UA Client Toolkit\bin" and paste it in the output project.
8. Copy the "license.dll" file located under ".:\Program Files (x86)\Integration Objects\Integration Objects' OPC UA Client Toolkit\bin\x64" and paste it in the output project.

Make sure to choose the "license.dll" file located under ".:\Program Files (x86)\Integration Objects\Integration Objects' OPC UA Client Toolkit\bin\x86" if you are using the 32-bit version.

## DEPLOYING A RUNTIME DISTRIBUTION

In order to deploy the client application from the development machine to the runtime machine, follow the steps below:

1. Create a new folder
2. Copy the following files to this new folder:
  - Config.json
  - IntegrationObjects.OpcUaNetClientToolkit.dll
  - IntegrationObjects.Opc.Ua.Core.dll
  - IntegrationObjects.Logger.SDK.dll
  - License.dll
  - The application executable and any other custom depending assembly
  - The UA XML configuration file (XXXX.Config.xml, where XXXX is the name of your OPC UA client application)
  - BouncyCastle.Crypto.dll
  - System.ServiceModel.Primitives.dll
  - ConnectionConfig.json (when using the OPC UA .Net Core Toolkit)
3. Move the folder to the runtime machine



**Make sure that OPC UA Client Toolkit is not installed in the runtime machine and that the path of the application folder does not include the words “Debug” or “Release”.**

For additional information on this guide, questions or problems to report, please contact:

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