

# **Integration Objects'**

## **.NET Toolkit for OPC UA Server Applications Development**

**OPC UA Server Toolkit**  
Version 1.0 Rev.0

## **QUICK USER GUIDE**

**OPC UA Server Toolkit®** Quick User Guide Version 1.0 Rev 0  
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## ABOUT THIS USER GUIDE

This guide is a step by step guide that lists the main steps on how to install, configure and run Integration Objects' OPC UA Server Toolkit.

## INSTALLATION PRE-REQUISITES

In order to properly run the Integration Objects' OPC UA Server Toolkit, install these software components on the target system:

- **.NET Framework version 4.6 or higher.**

## INSTALLING OPC UA SERVER TOOLKIT

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

If you are evaluating the OPC UA Server Toolkit, make sure to select the "Demo version" option when reaching the "Select Features" dialog. Otherwise, select the "Full version" option. The demo version allows you to benefit from an evaluation license valid for 30 days and limited to 2 hour runtime.

## COMPILING AND LINKING APPLICATIONS

This section details the steps to follow in order to compile and correctly link applications to develop a custom OPC UA server application using Integration Objects' OPC UA Server Toolkit and Microsoft Visual Studio 2017.

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:

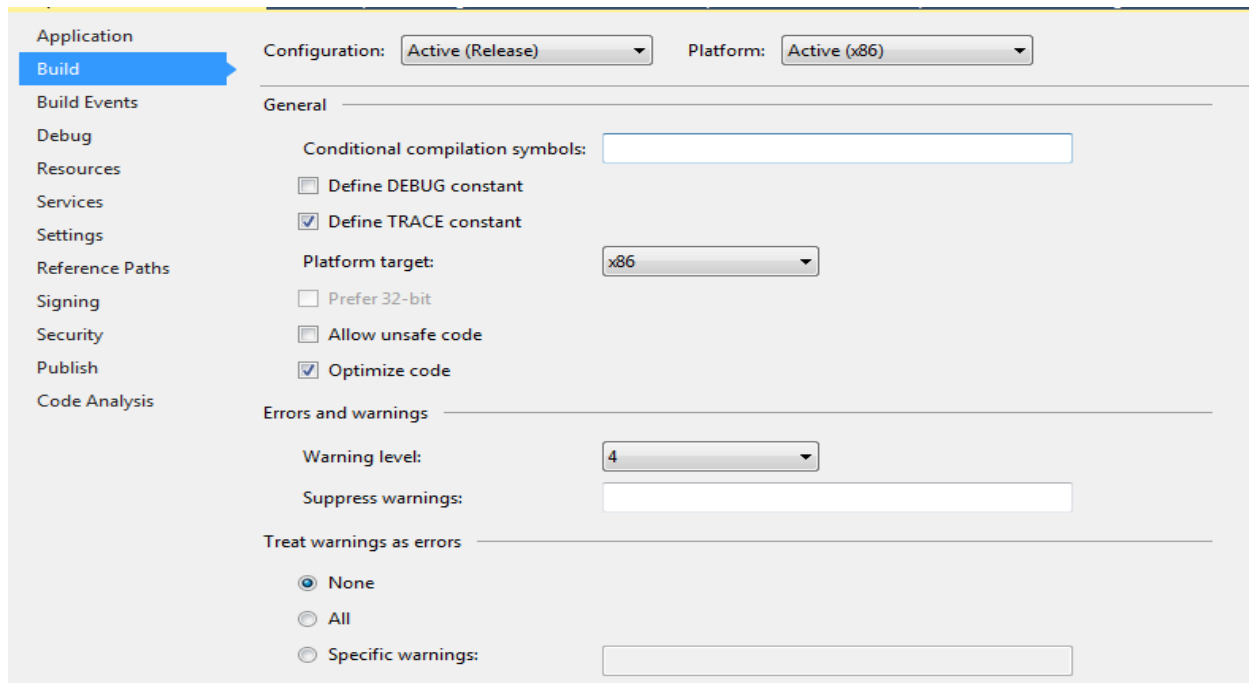


Figure 1: Platform for 32-bit Machine

For users who have to build the application in a **64-bit** machine, the target platform has to be **x64** as illustrated in the screen shot below:

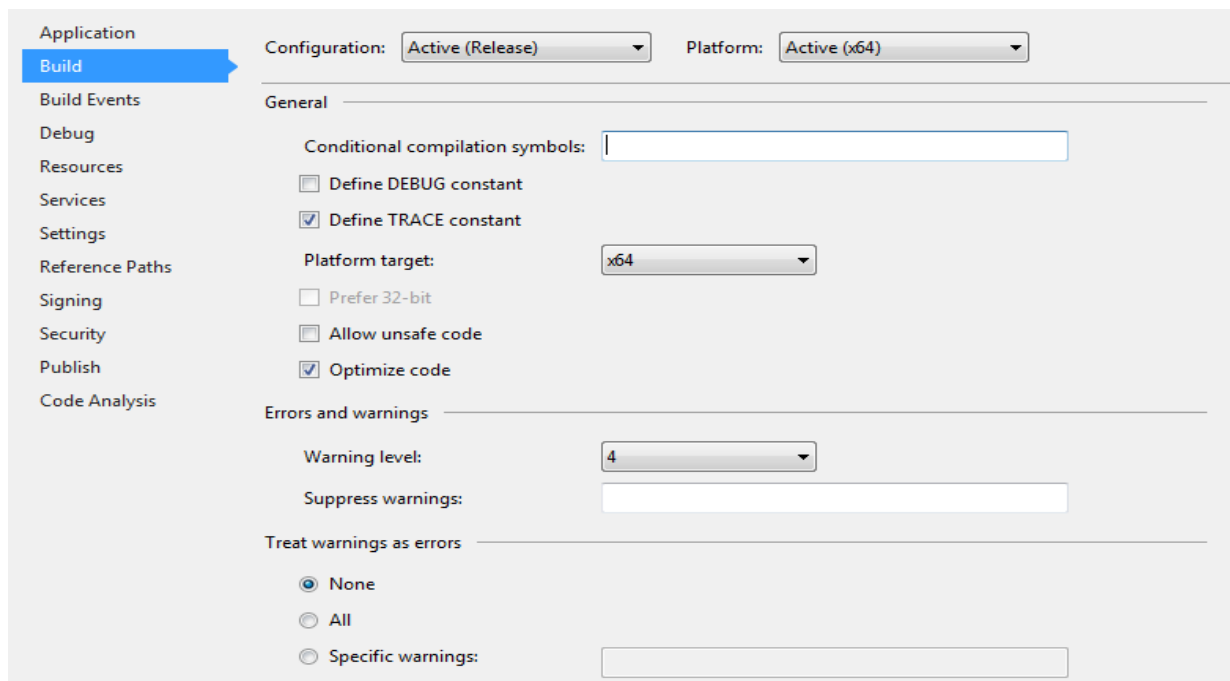
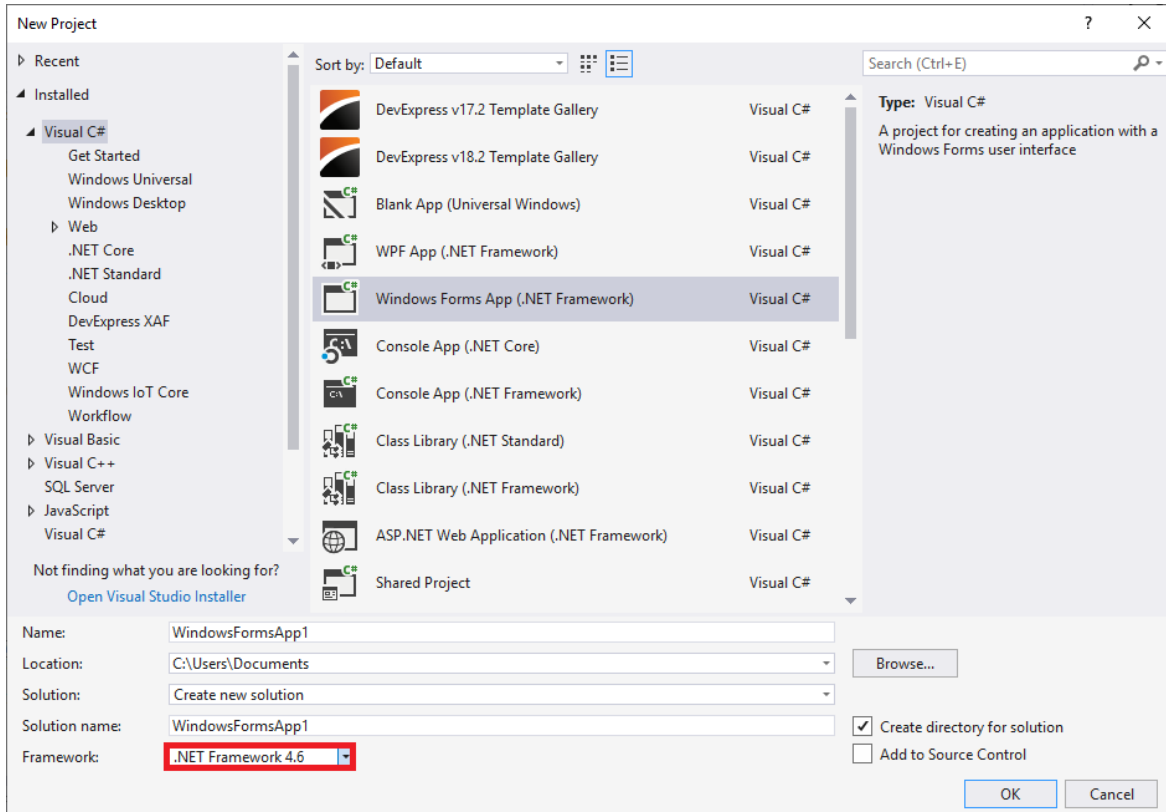


Figure 2: Platform for 64-bit Machine

Follow the steps below:

1. Start Visual Studio 2017 and choose **New Project**. The following window will be displayed:



**Figure 3: New Project**

2. Choose Visual C# **Windows Forms Application** Project and then click **OK**.

A project named WindowFormsApplication with a form called Form1 will be automatically created.

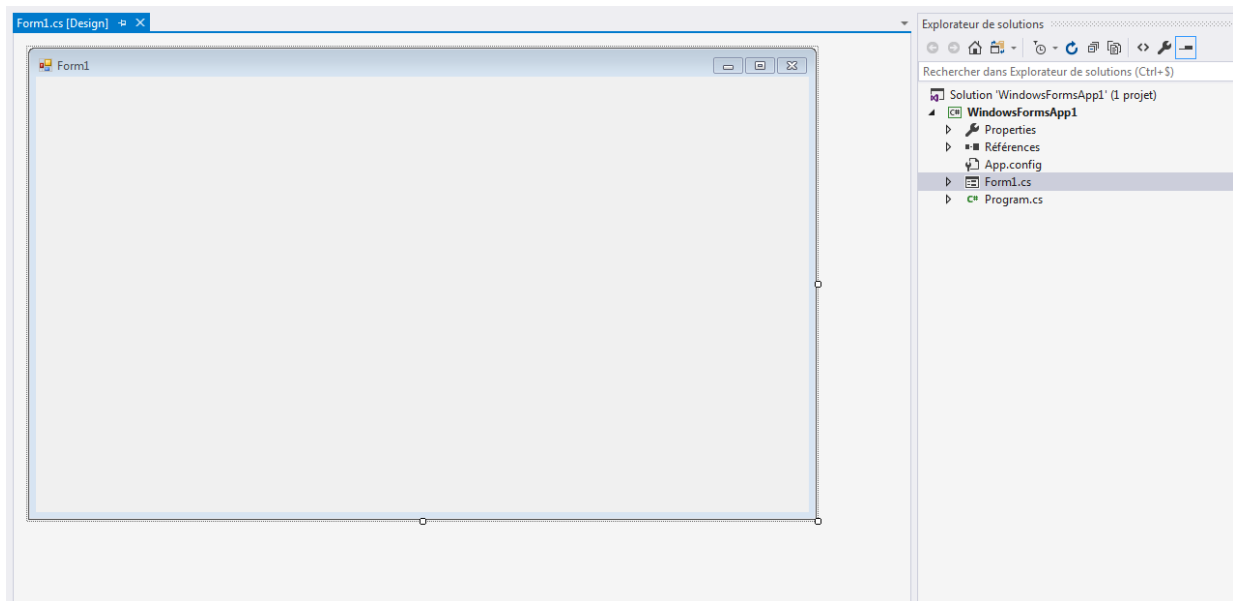


Figure 4: Windows Form Project Template

3. Add reference to the OPC UA Server Toolkit as illustrated below:

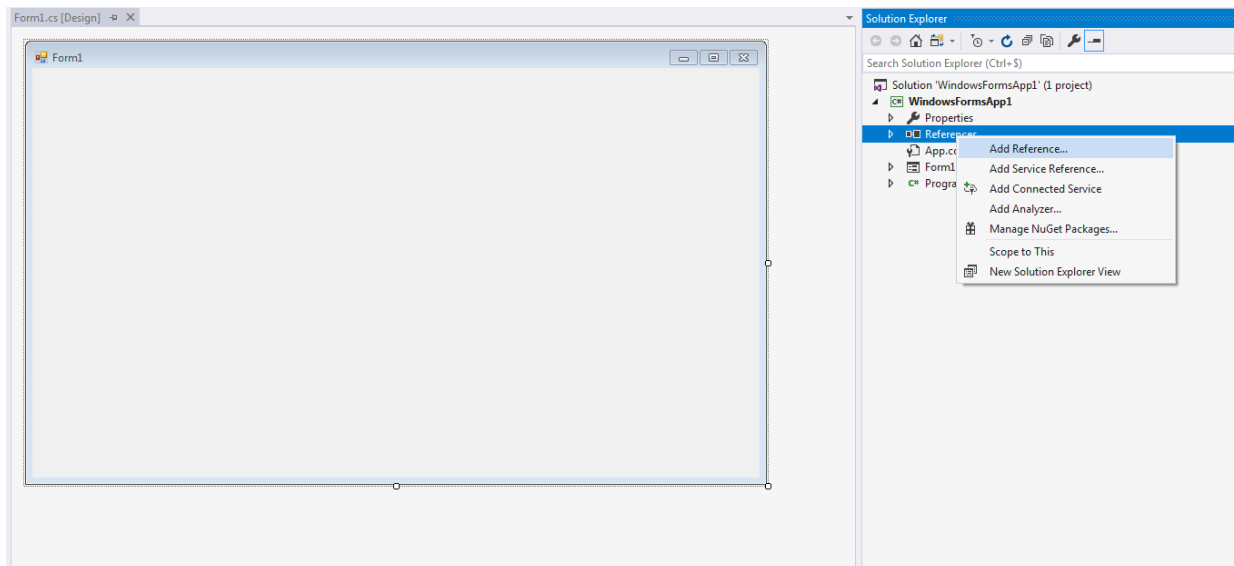


Figure 5: Solution Explorer

4. Select Browse tab from the displayed **Add Reference** window.

5. Select **IntegrationObjects.Opc.Ua.Server.Toolkit.dll** located under the **bin** folder in the installation folder.

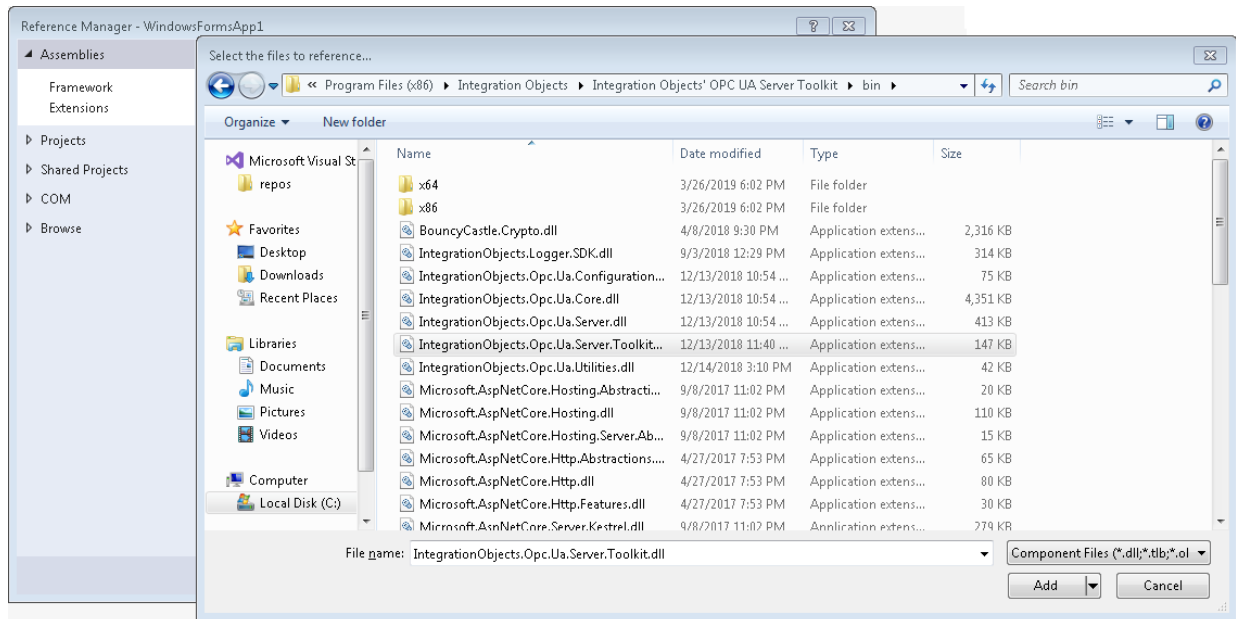


Figure 6: Choosing a Reference

## DEPLOYING A RUNTIME DISTRIBUTION

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

1. Create a new folder.
2. Copy the following files:
  - Config.ini.
  - IntegrationObjects.Logger.SDK.dll.
  - IntegrationObjects.Opc.Ua.Server.Toolkit.dll.
  - IntegrationObjects.Opc.Ua.Configuration.dll.
  - IntegrationObjects.Opc.Ua.Server.dll.
  - IntegrationObjects.Opc.Ua.Utilities.dll.
  - IntegrationObjects.Opc.Ua.Core.dll.
  - License.dll.
  - libuv.dll
  - The application executable and any other custom assembly dependencies.
  - The UA XML configuration file (XXXX.Config.xml, where XXXX is the name of your OPC UA server application).
  - BouncyCastle.Crypto.dll.

- Microsoft.AspNetCore.Hosting.Abstractions.dll.
- Microsoft.AspNetCore.Hosting.dll.
- Microsoft.AspNetCore.Hosting.Server.Abstractions.dll.
- Microsoft.AspNetCore.Http.Abstractions.dll.
- Microsoft.AspNetCore.Http.dll.
- Microsoft.AspNetCore.Http.Features.dll.
- Microsoft.AspNetCore.Server.Kestrel.dll.
- Microsoft.AspNetCore.Server.Kestrel.Https.dll.
- Microsoft.AspNetCore.WebUtilities.dll.
- Microsoft.Extensions.Configuration.Abstractions.dll.
- Microsoft.Extensions.Configuration.dll.
- Microsoft.Extensions.Configuration.EnvironmentVariables.dll.
- Microsoft.Extensions.DependencyInjection.Abstractions.dll.
- Microsoft.Extensions.DependencyInjection.dll.
- Microsoft.Extensions.FileProviders.Abstractions.dll.
- Microsoft.Extensions.FileProviders.Physical.dll.
- Microsoft.Extensions.FileSystemGlobbing.dll.
- Microsoft.Extensions.Logging.Abstractions.dll.
- Microsoft.Extensions.Logging.dll.
- Microsoft.Extensions.ObjectPool.dll.
- Microsoft.Extensions.Options.dll.
- Microsoft.Extensions.PlatformAbstractions.dll.
- Microsoft.Extensions.Primitives.dll.
- Microsoft.Net.Http.Headers.dll.
- Newtonsoft.Json.dll.
- System.Buffers.dll.
- System.Collections.Immutable.dll.
- System.Diagnostics.DiagnosticSource.dll.
- System.Numerics.Vectors.dll.
- System.Reflection.Metadata.dll.
- System.Runtime.CompilerServices.Unsafe.dll.
- System.Runtime.InteropServices.RuntimeInformation.dll.
- System.Text.Encoding.Web.dll.
- System.Threading.Tasks.Extensions.dll.

3. Copy the folder to the runtime machine.



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

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

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