

Section 12:

Microsoft .NET Integration

This section describes various techniques for integrating CLIPS and creating executables when using Microsoft .NET. The examples in this section have been tested running on Windows 10 Home Premium 32-bit Operating System and Windows 7 Professional 64-bit Operating System with Visual Studio 2015.

12.1 Installing the Source Code

In order to run the integration examples, you must install the source code by downloading the `clips_dotnet_###.zip` file (see appendix A for information on obtaining CLIPS). Once downloaded, you must then extract the contents of the file by right clicking on it and selecting the “Extract All...” menu item. Drag the *CLIPSNET_VS_YYYY* solution directory into the directory you’ll be using for development. In addition to the source code specific to the Windows projects, the core CLIPS source code is also included, so there is no need to download this code separately.

12.2 Building the .NET Library and Example Executables

The .NET integration source code includes nine projects:

- `AnimalFormsExample`
- `AnimalWPFExample`
- `AutoFormsExample`
- `AutoWPFExample`
- `CLIPSCLRWrapper`
- `RouterFormsExample`
- `RouterWPFExample`
- `WineFormsExample`
- `WineWPFExample`

The `CLIPSCLRWrapper` project creates a .NET DLL using a Common Language Runtime wrapper around the native CLIPS code. There are four examples utilizing the DLL with each example implemented using a Windows Forms project and a Windows Presentation Foundation project (for a total of eight projects). Prebuilt 32 and 64 bit versions of the DLL and example applications are contained in the Executables subdirectory of the solution directory.

12.2.1 Building the Projects Using Microsoft Visual Studio 2015

Navigate to the solution directory and open the file CLIPSNET.sln by double clicking on it (or right click on it and select the *Open* menu item). After the file opens in Visual Studio, select *Configuration Manager...* from the *Build* menu. Select the Configuration (Debug or Release) and the Platform (x86 or x64) for each project and then click the *Close* button. Select the *Build Solution* menu item from the *Build* menu. When compilation is complete, each example application will be in the <Platform>\<Configuration> subdirectory of the corresponding project *bin* directory and the .NET DLL files will be in the <Platform>\<Configuration> subdirectory of *CLIPSCLRWrapper\Libraries* directory.

To compile projects individually, right click on the project name in the *Solution Explorer* pane and select the *Build* menu item.