SIF 3.0 Framework (.NET)

Version

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# Introduction

This document explains the steps necessary for a software developer to implement a SIF Consumer using the .NET version of the SIF 3.0 Framework.

Before attempting the steps in this document, it is assumed that the following document has already been read:

* SIF Framework Installation and Verification

# Pre-requisite libraries

In Visual Studio, create a new Solution and new Console Application Project.

Once done, the following libraries need to be added to the project:

* SIF 3.0 Framework libraries
* log4Net, slf4Net.log4Net

## SIF 3.0 Framework libraries

Using “Manage NuGet Packages…”, add the Sif.Framework package to this project.

Depending upon the locale, one of the following packages is also required:

* Sif.Specification.DataModel.Au
* Sif.Specification.DataModel.Uk
* Sif.Specification.DataModel.Us

## log4Net, slf4Net.log4Net

Using “Manage NuGet Packages…”, add the log4Net and slf4Net.log4Net packages to this project. Instructions on the use of slf4Net and log4Net fall outside the scope of this document.

# Project configuration

## SIF 3.0 Framework configuration

Copy the SifFramework.config configuration file from the Templates\Consumers directory of the SIF 3.0 Framework into this project. Ensure the “Copy to Output Directory” file property is set to “Copy if newer”. Within the configuration file, set the following properties to uniquely identify your application to the EnvironmentProvider:

* consumer.environment.sharedSecret
* consumer.environment.template.applicationKey
* consumer.environment.template.instanceId (if known)
* consumer.environment.template.solutionId (if known)
* consumer.environment.template.userToken (if known)

These values should have been provided by the Administrator of the EnvironmentProvider your SIF Provider is connecting with.

## slf4Net and log4Net configuration

Installation of the slf4Net and log4Net NuGet packages would have updated the App.config file with appropriate configuration settings. If an slf4net element has not been added, refer to the copy in a Consumer demo project.

Copy the log4net.config configuration file from the Templates\Consumers directory of the SIF 3.0 Framework into this project. Ensure the “Copy to Output Directory” file property is set to “Copy always”.

# Define the SIF Data Model Object

For the implementation of a SIF Consumer, a SIF Data Model Object class needs to be specified. A requirement for the use of this Framework is that the class must implement the IDataModel interface. For an example implementation (of a student), refer to one of the Consumer demo projects.

It is important that the model object used will serialise (XML) to meet the SIF Data Model Specification for a locale. To assist with this requirement, the Sif3Specification Solution can be used as a reference for any data model objects used. Of particular importance are the namespaces used for types.

# Create the SIF Consumer

To implement the SIF Consumer, create a new class that extends the BasicConsumer class with the previously defined SIF Data Model Object class as the generic type. Implement the constructors to simply call upon the “base” constructors of the BasicConsumer class.