SIF Framework (.NET)

Version 6.0.0

Implementing a SIF Consumer

**Author:** , SIF Solutions Architect

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# Introduction

This document outlines the steps necessary to implement a SIF Consumer using the .NET version of the SIF Framework.

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

* SIF Framework Setup Guide

# Prerequisites

In Visual Studio, create a new Console Application project (.NET 6.0 recommended).

Once done, using “Manage NuGet Packages…” add the latest version of the following packages to the project:

* Sif.Framework.EntityFrameworkCore
* Sif.Specification.DataModel.Au
* An appropriate SQL database driver

A SIF Consumer requires a database to store a session token used for managing its connection to an Environment Provider. The definition of the required *Sessions* database table can be found in one of the SQL scripts files under the *Scripts\SQL\Entity Framework Core\Sessions table* folder.

# Project configuration

In the project, create an appsettings.json configuration file and ensure that the following properties are correctly set:

* Build Action – Content
* Copy to Output Directory – Copy if newer

Add the following entries to appsettings.json for registering your SIF Consumer application to the Environment Provider:

* ConnectionStrings:DefaultConnection
* consumer.environment.sharedSecret
* consumer.environment.url
* consumer.environment.template.applicationKey
* consumer.environment.template.authenticationMethod
* consumer.environment.template.dataModelNamespace
* consumer.environment.template.instanceId (if known)
* consumer.environment.template.solutionId (if known)
* consumer.environment.template.userToken (if known)

The DefaultConnection database connection string property is not SIF Framework specific but will be used for the instantiation of a service that accesses the session token from the SIF Consumer database.

The values associated with the other entries should be provided by the SIF Administrator of the Environment Provider your application is connecting with.

# Define the SIF Data Model object

For the implementation of a SIF Consumer, a data model class needs to be created that represents a known SIF Data Model object. It is suggested to extend one of the SIF Data Model objects that are available from the Sif3Specification Solution. This Solution consists of projects that provide reference data model implementations that meet the SIF Specification. Of particular importance are the namespaces used for these classes.

A requirement of the SIF Framework is that the created data model class must implement the IDataModel interface. It is also important that the data model class used will serialise (XML) to meet the SIF Data Model Specification for a locale. For an example implementation of the data model class, refer to one of the SIF Consumer demonstration projects.

# 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 class as the generic type. Implement the constructor to simply call upon the “base” constructor of the BasicConsumer class.