To develop a custom human translation service, you need to define a class that inherits from **AbstractHumanTranslationService** (found in the **CMS.TranslationServices** namespace).

The service class must override and implement the following abstract methods:

Method	Description
IsAvailable	Checks whether the service is appropriately configured and ready to be used. For example, you can confirm that valid connection credentials are specified for the service in the website settings or check whether there is sufficient credit to perform translations. When translating pages, users can only choose the service if the *IsAvailable* method returns a *true* value.
IsSourceLanguageSupported	Checks whether the service supports translation from a specific language. The system calls this method before creating new translation submissions for the service. Users can only create submissions if the *IsSourceLanguageSupported* method of the selected service returns a true value for the source language.
IsTargetLanguageSupported	Checks whether the service supports translation to a specific language. The system calls this method before creating new translation submissions for the service. Users can only create submissions if the *IsTargetLanguageSupported* method of the selected service returns a true value for the target language.
CreateSubmission	Delivers the translation assignment to the translators. Called when creating new translation submissions for the service or resubmitting existing ones.
CancelSubmission	Executed when a user cancels a translation submission in the **Translations** application. Depending on the type of the service, you can delete the submission's physical file, call the appropriate service API or otherwise inform the translators that the submission has been canceled.
DownloadCompletedTranslations	Retrieves translated content from the service and imports it into the submission tickets. The system automatically calls this method when updating the status of translation submissions, which can be triggered by: • Users clicking **Update statuses** in the **Translations** application • Execution of the **Translation retrieval** scheduled task

Defining human service classes

This example shows the implementation of a translation service that saves translation submissions into zip packages and exports them into a designated folder. It also provides a way to automatically load completed translations from an import folder. This sample service is a simplified version of the default Manual translation service.

1. Open your web project in Visual Studio.
2. Add a new class into the **App_Code** folder (or **Old_App_Code** on web application installations). For example, name the class **SampleTS.cs**.
3. Change the class declaration and add references according to the following code:

```
using System;
using System.Text;
using System.Data;
using System.Collections.Generic;
using System.Collections;
using System.Web;

using CMS.TranslationServices;
using CMS.DataEngine;
using CMS.Helpers;
using CMS.IO;
using CMS.DataEngine;

/// <summary>
/// Sample human translation service.
/// </summary>
public class SampleTS : AbstractHumanTranslationService
{

}
```

4. Add the following properties into the class:

```
/// <summary>
/// Gets the path of the folder to which the service exports translation
submissions.
/// </summary>
public string ExportFolder
{
    get
    {
        string folder = SettingsKeyInfoProvider.GetValue(SiteName + ".
SampleTranslationExportFolder");
        if (string.IsNullOrEmpty(folder))
        {
            // Sets a default export folder if the path can't be loaded from the
site settings.
            folder = "~/App_Data/Translations/Export/";
        }
        return URLHelper.GetPhysicalPath(folder);
    }
}

/// <summary>
/// Gets the path of the folder that the service checks for files containing
completed translations.
/// </summary>
public string ImportFolder
{
    get
    {
        string folder = SettingsKeyInfoProvider.GetValue(SiteName + ".
SampleTranslationImportFolder");
        if (string.IsNullOrEmpty(folder))
        {
            // Sets a default import folder if the path can't be loaded from the
site settings.
            folder = "~/App_Data/Translations/Import/";
        }
        return URLHelper.GetPhysicalPath(folder);
    }
}
```

The **ExportFolder** and **ImportFolder** properties load the translation folder paths from the website settings. If the setting values are not available, the properties return default folder paths. The **SiteName** property used to build the setting key names is inherited from the parent class. It gets the code name of the site from which the translation was submitted.

5. Define the required methods inside the class:

IsAvailable

```
/// <summary>
/// Checks if all conditions required to run the service are fulfilled.
/// The sample service only needs to know the paths for its import and export
folders, but it uses default paths if the values are not specified through the
settings.
/// </summary>
public override bool IsAvailable()
{
    // Returns a true value to indicate that the service is always available.
    return true;
}
```

IsSourceLanguageSupported

```
/// <summary>
/// Checks if the service supports a specific source language.
/// </summary>
/// <param name="langCode">Culture code of the source language to be checked<
/param>
public override bool IsSourceLanguageSupported(string langCode)
{
    // All source languages are supported.
    return true;
}
```

IsTargetLanguageSupported

```
/// <summary>
/// Checks if the service supports a specific target language.
/// </summary>
/// <param name="langCode">Culture code of the target language to be checked<
/param>
public override bool IsTargetLanguageSupported(string langCode)
{
    // All target languages are supported.
    return true;
}
```

CreateSubmission

```
/// <summary>
/// Creates a new submission or resubmits it if the submission ticket already
exists.
/// Returns an empty string if all operations are successful or the details of
the encountered error.
/// </summary>
/// <param name="submission">Info object representing the translation submission<
/param>
public override string CreateSubmission(TranslationSubmissionInfo submission)
{
    try
    {
        if (submission != null)
        {
            // Gets the path of the zip file containing the submission.
            string path = null;
            if (string.IsNullOrEmpty(submission.SubmissionTicket))
            {
                path = Path.Combine(this.ExportFolder, ValidationHelper.
GetSafeFileName(submission.SubmissionName) + ".zip");
                path = FileHelper.GetUniqueFileName(path);
                // Assigns the zip file name as the ticket ID of the new
submission.
                submission.SubmissionTicket = Path.GetFileName(path);
            }
            else
            {
                // The resubmit action uses the existing file path stored in the
ticket ID.
                path = Path.Combine(this.ExportFolder, submission.
SubmissionTicket);
            }
            // Writes the zip file under the specified path. Overwrites the file
if it exists.
            DirectoryHelper.EnsureDiskPath(path, null);
            using (FileStream stream = File.Create(path))
            {
                // Creates the zip archive with the translation assignment.
                // The archive contains the source text of the submitted pages in
XLIFF format and an HTML instructions file with the details entered for the
translation.
                TranslationServiceHelper.WriteSubmissionInZIP(submission, stream);
            }
        }
    }
    catch (Exception ex)
    {
        TranslationServiceHelper.LogEvent(ex);
        return ex.Message;
    }
    return null;
}
```

CancelSubmission

```
/// <summary>
/// Cancels the specified submission.
/// Returns an empty string if all operations are successful or the details of
the encountered error.
/// </summary>
/// <param name="submission">Info object representing the canceled submission<
/param>
public override string CancelSubmission(TranslationSubmissionInfo submission)
{
    try
    {
        if (submission != null)
        {
            // Tries to delete the assignment zip file (loads the file name from
the submission ticket ID).
            string path = Path.Combine(this.ExportFolder, submission.
SubmissionTicket);
            if (File.Exists(path))
            {
                File.Delete(path);
            }
        }
    }
    catch (Exception ex)
    {
        TranslationServiceHelper.LogEvent(ex);
        return ex.Message;
    }
    return null;
}
```

DownloadCompletedTranslations

```
/// <summary>
/// Retrieves completed XLIFF translation files from the service and imports them
into the system.
/// Returns an empty string if all operations are successful or the details of
the encountered error.
/// </summary>
public override string DownloadCompletedTranslations(string siteName)
{
    try
    {
        if (Directory.Exists(this.ImportFolder))
        {
            // Gets all zip files from the import folder.
            string[] files = Directory.GetFiles(this.ImportFolder, "*.zip");
            foreach (string filePath in files)
            {
                string file = Path.GetFileName(filePath);

                // Gets all translation submissions matching the zip file name.
                DataSet ds = TranslationSubmissionInfoProvider.GetSubmissions
("SubmissionTicket = '" + SqlHelper.EscapeQuotes(file) + "'", null);
                if (!DataHelper.DataSourceIsEmpty(ds))
```

```
                {
                    foreach (DataRow dr in ds.Tables[0].Rows)
                    {
                        TranslationSubmissionInfo submission = new
TranslationSubmissionInfo(dr);
                        // Only imports content for submissions in the 'Waiting
for translation' status.

                        if (submission.SubmissionStatus == TranslationStatusEnum.
WaitingForTranslation)
                        {
                            // Gets the zip name from the submission ticket.
                            string fileName = submission.SubmissionTicket;
                            string path = Path.Combine(this.ImportFolder,
fileName);
                            if (File.Exists(path))
                            {
                                // Imports XLIFF file content from the zip
package.
                                string err = TranslationServiceHelper.
ImportXLIFFfromZIP(submission, FileStream.New(path, FileMode.Open));
                                if (string.IsNullOrEmpty(err))
                                {
                                    // Changes the status to 'Translation ready'
and saves the submission.
                                    submission.SubmissionStatus =
TranslationStatusEnum.TranslationReady;
                                    TranslationSubmissionInfoProvider.
SetTranslationSubmissionInfo(submission);
                                }
                                else
                                {
                                    return err;
                                }
                            }
                        }
                    }
                }
            }
        }
        return null;
    }
    catch (Exception ex)
    {
        TranslationServiceHelper.LogEvent(ex);
        return ex.Message;
    }
}
```

6. Follow the instructions on the Loading translation service classes from App_Code page to ensure that the application can access the custom class.

Registering human translation services

Once you have implemented the class with the required functionality, you need to register the translation service:

1. Log in to the Kentico administration interface.
2. Open the **Translation services** application.

3. Click **New translation service**.
4. Enter the following values into the service's properties:

   - **Display name**: Sample translation service
   - **Service provider - Assembly name**: (custom classes)
   - **Service provider - Class**: SampleTS
   - **Is machine translation service**: no (not checked)
   - **Service is enabled**: yes (checked)

   - **Supports submitting instructions**: yes
   - **Supports prioritizing of submissions**: yes
   - **Supports submission deadlines**: yes
   - **Supports manual status update**: yes
   - **Supports canceling submissions**: yes
   - **Translation service parameter:** leave empty

5. Click **Save**.

The service is now ready to be used.

Adding custom settings for translation services

To allow administrators to configure the import and export folder paths of the service, you need to create custom settings:

1. Open the **Modules** application.
2. Click **New module**.
3. Type *Custom translation settings* as the module's **Display name**.
4. Click **Save**.
5. Open the module's **Settings** tab.
6. Click **New category** (+):

   - **Display name**: Custom translation service
   - **Code name**: CustomTranslationService

7. Switch to the **Settings** sub-tab of the category and add a **New settings group**.

   - **Display name**: Translation paths
   - **Code name**: TranslationPaths

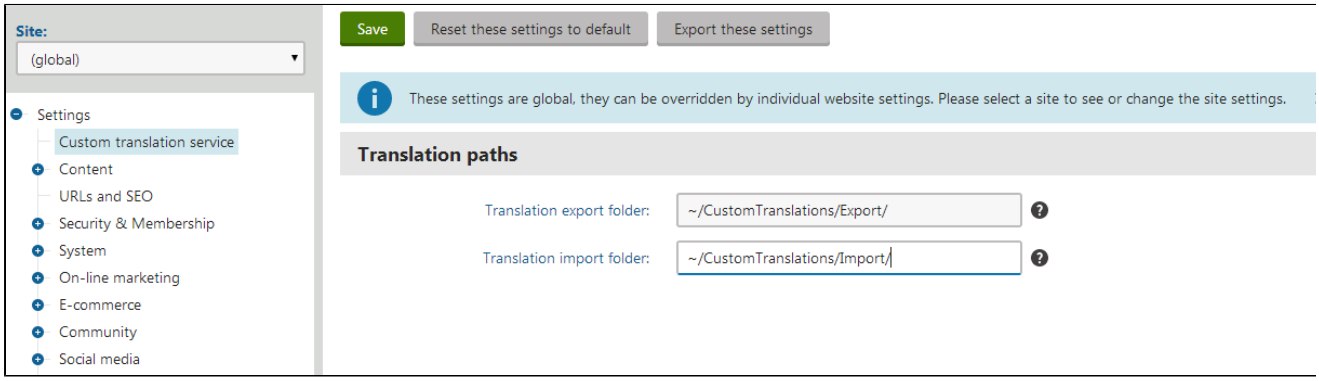
8. Click **New settings key** under the *Translation paths* section and define two setting keys:

   - **Display name**: Translation export folder
   - **Code name**: SampleTranslationExportFolder (matches the name of the key loaded by the *ExportFolder* property in the code of the sample service class)
   - **Description**: Sets the path of the folder where the system creates translation submissions. If empty, the ~/App_Data/Translations/Export/ folder is used.
   - **Type**: Text

   - **Display name**: Translation import folder
   - **Code name**: SampleTranslationImportFolder (matches the name of the key loaded by the *ImportFolder* property in the code of the sample service class)
   - **Description**: Sets the path of the folder from which the system loads completed translation packages. If empty, the ~/App_Data/Translations/Import/ folder is used.
   - **Type**: Text

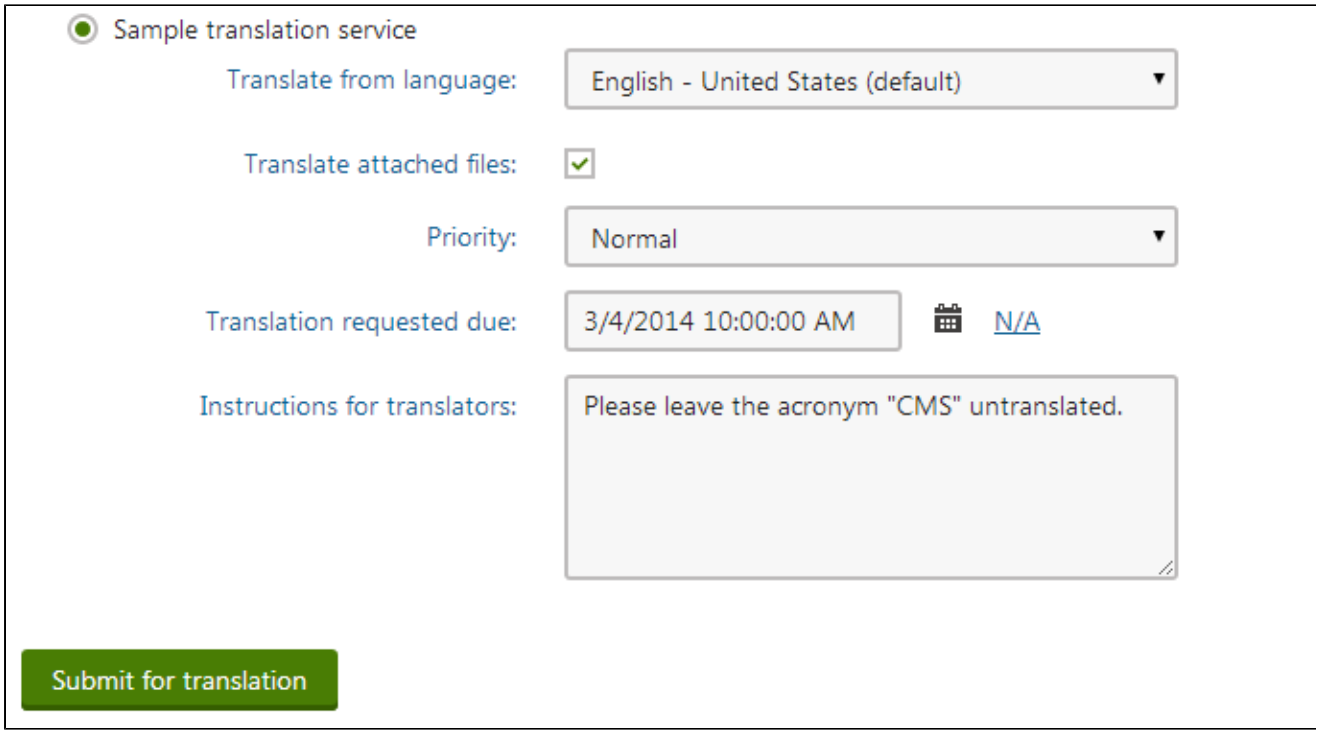
9. Click **Save** for each key.

You can now set the service's folder paths for specific websites in the **Settings** application, within the **Custom translation service** category.



Result

When submitting pages for translation, the dialog offers the *Sample translation service* as one of the translation options.



Try translating a page using the custom service:

1. Click **Submit for translation** in the *New culture version* dialog.
   - The system creates a new submission and adds the translation zip package into the specified export folder.
2. Translate the content and add the modified *.xlf* file into a new zip package (with the same name as the export zip file).
   - Place the zip package into the import folder.
3. In the Kentico administration interface, open the **Translations** application and click **Update statuses**.
   - The service imports the translated content and switches the matching submission to the *Translation ready* status.
4. Click the **Process submission** ( ) action of the submission.

- The system transfers the translated content into the corresponding page and changes the submission status to *Translation imported*.

The page is now available in the target language.