

Microsoft IT

Dynamics CRM
Forms Deployment Document



MICROSOFT LABS

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DYNAMICS 365 MODERN IMMIGRATION MANAGEMENT SYSTEM

The solution provides end-to-end scenario to manage and track immigration cases for their employees.

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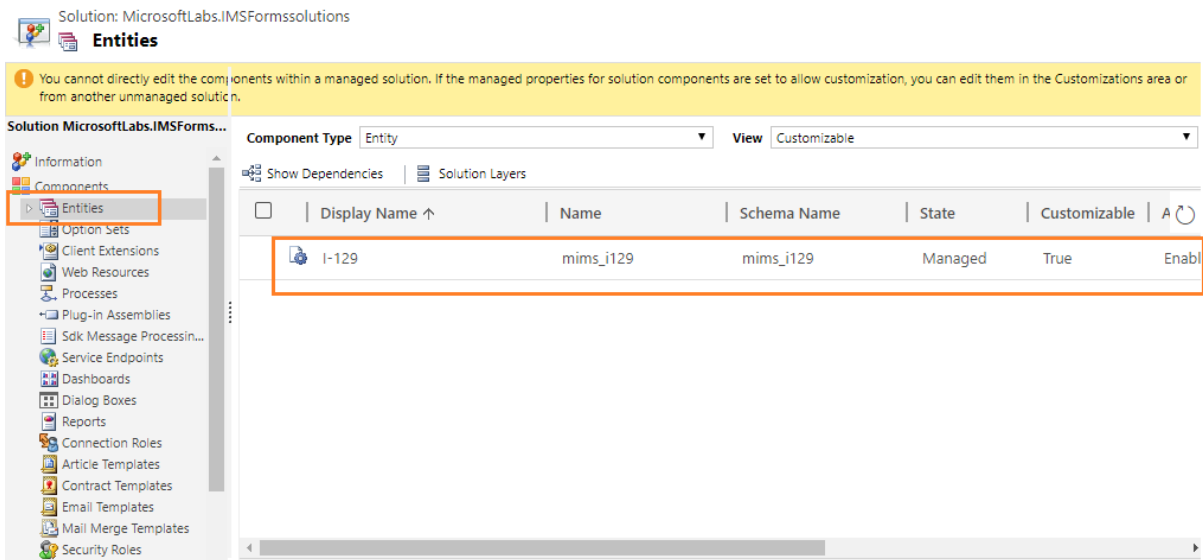
1. Document Overview

This document describes the process of configuration of USCIS forms in IMS application and updating them with latest versions. Whenever IMS application update is available in appsource, **MicrosoftLabs.IMSFormssolutions** solution needs to be checked, if there are any updates in this solution, the below process needs to be followed for the forms included in the solution. The below process needs to be performed after the complete installation and setup of IMS Application.

2. Identification of Forms which need to be updated

- 1) Open the **MicrosoftLabs.IMSFormssolutions** solution which will be installed through the appsource link of IMS application. Click on entities tab as shown in below screenshot.
- 2) Note down the entities that are present there (For e.g. I-129 is present in the solution, I-129 form must be updated).

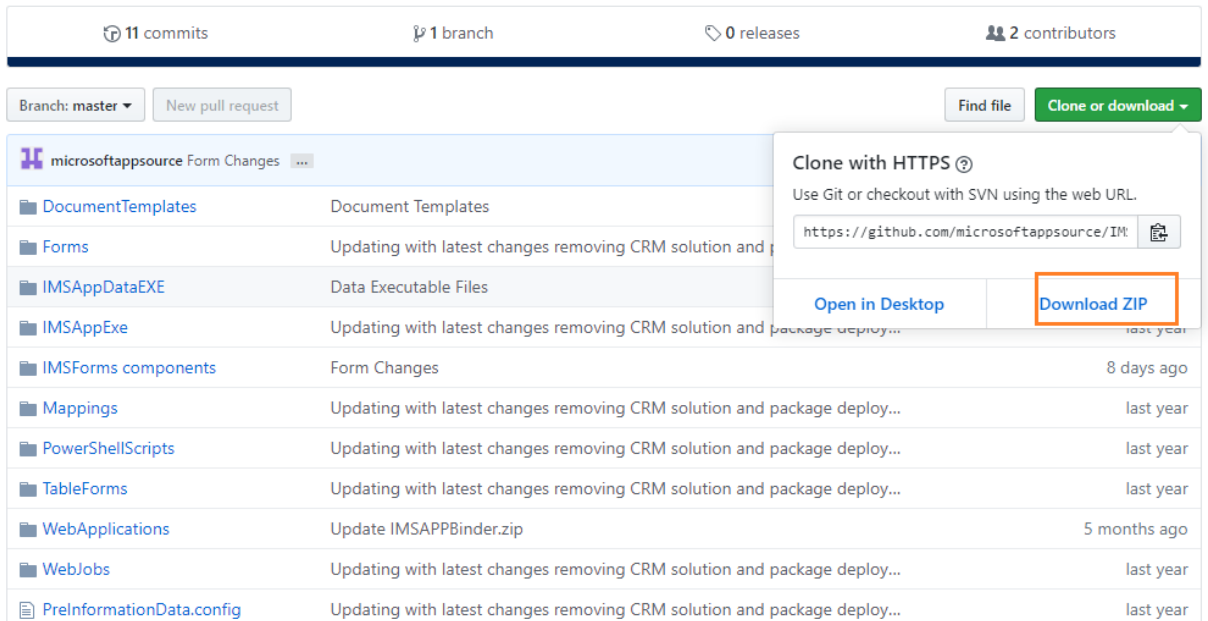
Those are the forms that need to be updated by following the below steps. Follow the below steps to update the master forms.



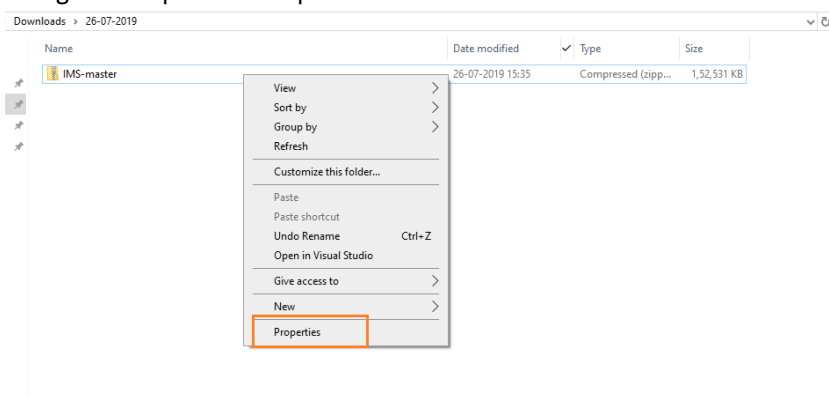
3. Go through the below link

<https://github.com/microsoftappsource/IMS>

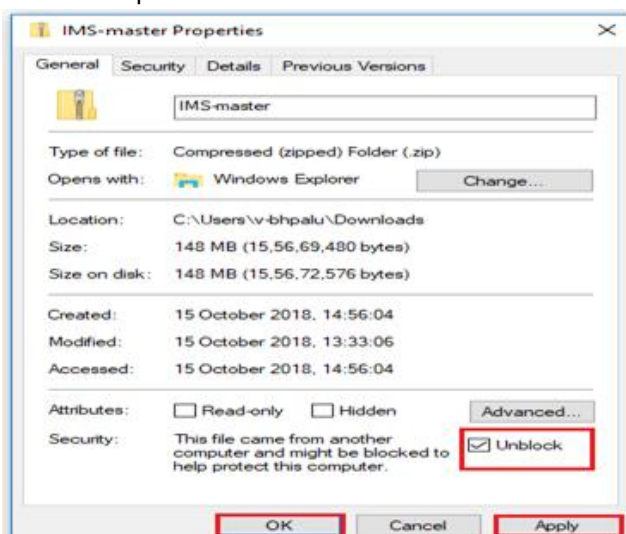
4. Download the components as shown below



5. Unblock the zip file which you downloaded from github as shown below.
6. Navigate to Zip File -> Properties



7. Click on Properties and check the unblock checkbox and click on "Ok" as shown below.



8. Extract the folder which contains all the IMS App Components. Open the **IMSForms components** folder. It contains the latest PDF files and mappings files of the forms that need to be updated.

Disk (D:) > IMS-master > IMS-master

Name	Date modified	Type	Size
DocumentTemplates	09-10-2019 12:43	File folder	
Forms	09-10-2019 12:43	File folder	
IMSAppDataEXE	09-10-2019 12:43	File folder	
IMSAppExe	09-10-2019 12:43	File folder	
IMSForms components	09-10-2019 12:43	File folder	
Mappings	09-10-2019 12:43	File folder	
PowerShellScripts	09-10-2019 12:43	File folder	
TableForms	09-10-2019 12:43	File folder	
WebApplications	09-10-2019 12:43	File folder	
WebJobs	09-10-2019 12:43	File folder	
PreInformationData	01-10-2019 07:04	CONFIG File	1 KB

Disk (D:) > IMS-master > IMS-master

Name	Date modified	Type	Size
DocumentTemplates	09-10-2019 12:43	File folder	
Forms	09-10-2019 12:43	File folder	
IMSAppDataEXE	09-10-2019 12:43	File folder	
IMSAppExe	09-10-2019 12:43	File folder	
IMSForms components	09-10-2019 12:43	File folder	
Mappings			
PowerShellScripts			
TableForms			
WebApplications			
WebJobs			
PreInformationData			

IMSForms components

Name	Date modified	Type
case documents samples		
PublishAzureResources		
Version 2		
OneDrive - Microsoft		
This PC		
3D Objects		
Desktop		
Documents		
Downloads		
Music		

Name	Date modified	Type
G-28	09-10-2019 12:43	File folder
I-129	09-10-2019 12:43	File folder
I-129DC	09-10-2019 12:43	File folder
I-129H	09-10-2019 12:43	File folder
I-129L	09-10-2019 12:43	File folder
I-129TN	09-10-2019 12:43	File folder
I-131	09-10-2019 12:43	File folder
I-539	09-10-2019 12:43	File folder
I-539A	09-10-2019 12:43	File folder
I-907	09-10-2019 12:43	File folder

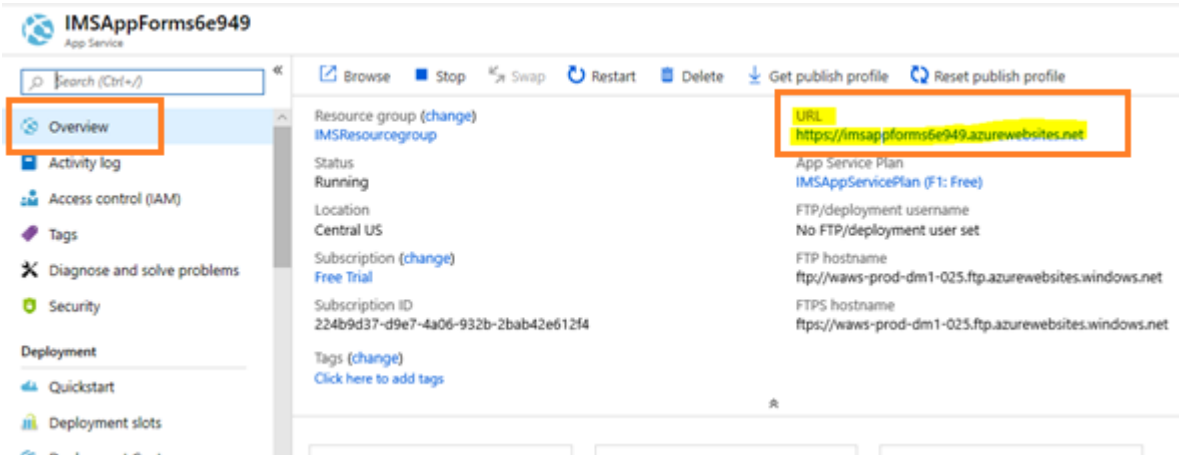
IMS-master > IMSForms components > G-28

Name	Date modified	Type
G-28 Latest Mappings File	01-10-2019 07:04	Text Document
G-28 Latest PDF	01-10-2019 07:04	PDF Document

9. Azure Forms Swagger

Please follow below steps while updating or registering new form components in azure:

- 1) Navigate to Azure. Open the Resource “Imsappforms” followed by your organization unique ID. On overview select the URL as shown in below screenshot.



- 2) Add the following to that URL “/swagger/ui/index” and open that URL.
For e.g.
<https://imsappforms6e949.azurewebsites.net/swagger/ui/index>
- 3) It will open up a page like this. In this we can retrieve or create the forms, formversions data by using the GET and POST methods.

FormsManagement

Form	Show/Hide	List Operations	Expand Operations
GET /api/v1/forms			Gets metadata for all forms
POST /api/v1/forms			Creates a new form with the specified metadata
GET /api/v1/forms/{formId}			Gets metadata for a specific form
GET /api/v1/forms/{formId}/versions			Gets all versions of a specific form
POST /api/v1/forms/{formId}/versions			Creates a new version of the specified form
GET /api/v1/forms/{formId}/versions/{expirationDate}			Gets a specific version of a specific form
PUT /api/v1/forms/{formId}/versions/{expirationDate}			Updates a version of the specified form, creates if not exists
GET /api/v1/forms/{formId}/versions/current			Gets the current version of a specific form
POST /api/v1/forms/{formId}/versions/{expirationDate}/create			Populates and returns a specific version of a PDF form with the provided values
POST /api/v1/forms/{formId}/versions/current/create			Populates and returns the current version of a PDF form with the provided values

10. Creating or Updating Form Versions

- 1) Click on **GET** /api/v1/forms. In the response body you can find all the forms with Id’s and names.

Form

GET /api/v1/forms

Response Class (Status 200)
OK

Model | Example Value

```
[
  {
    "FormID": "string",
    "Name": "string"
  }
]
```

Response Content Type application/json

Try it out!

- 2) Check if the form you are trying to update in azure is already there in the response body. If the form is already present, skip steps 3,4.

Response Body

```
[
  {
    "FormID": "G-28",
    "Name": "Notice of Entry of Appearance as Attorney or Accredited Representative"
  },
  {
    "FormID": "G-325A",
    "Name": "Biographic Information"
  },
  {
    "FormID": "I-129",
    "Name": "Petition for a Nonimmigrant Worker"
  },
  {
    "FormID": "I-129DC",
    "Name": "H-1B and H-1B1 Data Collection and\nFiling Fee Exemption Supplement"
  },
  {
    "FormID": "I-129H",
    "Name": "H-1B and H-1B1 Data Collection and\nFiling Fee Exemption Supplement"
  }
]
```

- 3) If the form is not present, click on **POST** /api/v1/forms
Enter the details you want to update in below format and click on try it out. It creates a new form with the given form.

For e.g.

```
{
  "FormID": "I-485",
  "Name": "Application to Register Permanent Residence or Adjust Status"
}
```

POST /api/v1/forms Creates a new form with the specified metadata

Parameters

Parameter	Value	Description	Parameter Type	Data Type
form	<pre>{ "FormID": "I-485", "Name": "Application to Register Permanent Residence or Adjust Status" }</pre>	Form metadata	body	Model Example Value <pre>{ "FormID": "string", "Name": "string" }</pre>

Parameter content type:

Response Messages

HTTP Status Code	Reason	Response Model	Headers
201	Created		Location Location of the newly created item string

- After trying it, repeat the step 1 and check if the form you are trying to update is present in the response body. If it is present, continue with the next step, else retry step 3.
- Click on GET /api/v1/forms/{formId}/versions and give the formID (for e.g. I-129) and click on Try it out as shown in below screenshot. This is done to check the existing versions of the form.

GET /api/v1/forms/{formId}/versions Gets all versions of a specific form

Response Class (Status 200)
OK

Model | Example Value

```
[
  {
    "EditionDate": "2019-07-08T04:39:47.372Z",
    "FormId": "string",
    "ActivationDate": "2019-07-08T04:39:47.372Z",
    "ExpirationDate": "2019-07-08T04:39:47.372Z",
    "FileName": "string",
    "HasBarcode": true,
    "ParameterMappingReference": "string"
  }
]
```

Response Content Type:

Parameters

Parameter	Value	Description	Parameter Type	Data Type
formId	I-129	Form ID to retrieve versions for	path	string

Response Messages

HTTP Status Code	Reason	Response Model	Headers
404	NotFound		

- If the response body has "No content" as shown in below screenshot, there are no versions of the form.

Response Body

```
no content
```

If the versions of the form are present, then the response contains those details as shown below:


```

Response Body

[
  {
    "EditionDate": "2017-01-17T00:00:00Z",
    "FormId": "I-129",
    "ActivationDate": "2017-01-17T00:00:00Z",
    "ExpirationDate": "2018-12-31T00:00:00Z",
    "ParameterMappings": {},
    "FileName": "39354ac4-45d0-474d-b6a1-fdeb3ca0cb1b.pdf",
    "HasBarcode": false,
    "ParameterMappingReference": "39354ac4-45d0-474d-b6a1-fdeb3ca0cb1b.txt"
  },
  {
    "EditionDate": "2019-01-31T00:00:00Z",
    "FormId": "I-129",
    "ActivationDate": "2019-01-31T00:00:00Z",
    "ExpirationDate": "2022-01-31T00:00:00Z",
    "ParameterMappings": {},
    "FileName": "a36a5f0c-5e38-47df-a706-ea459c0b1666.pdf",
    "HasBarcode": false,
    "ParameterMappingReference": "a36a5f0c-5e38-47df-a706-ea459c0b1666.txt"
  }
]

```

7) To create or update the form version, click on POST `/api/v1/forms/{formId}/versions`. For creating a new version, we need to fill, formId, content, metadata and mappings.

POST `/api/v1/forms/{formId}/versions` Creates a new version of the specified form

Parameters

Parameter	Value	Description	Parameter Type	Data Type
formId	<input type="text" value="(required)"/>	Form ID to add version to	path	string
content	<input type="text" value="Browse..."/>	PDF form content	formData	file
metadata	<input type="text" value="(required)"/>	Form version metadata	formData	Model
mappings	<input type="text"/>	Form version mappings	formData	string

Example Value

```

{
  "EditionDate": "2019-07-08T04:55:57.760Z",
  "FormId": "string",
  "ActivationDate": "2019-07-08T04:55:57.760Z",
  "ExpirationDate": "2019-07-08T04:55:57.760Z",
  "FileName": "string",
  "HasBarcode": true,
  "ParameterMappingReference": "string"
}

```

Response Messages

HTTP Status Code	Reason	Response Model	Headers
201	Created		Location Location of the newly created item string
404	NotFound		

- a. **formId**: Id of the form e.g. I-129
- b. **content**: Upload the latest PDF file of the I-129.
- c. **metadata**: Update the details in the Metadata sample with the latest EditionDate, ActivationDate, ExpirationDate and HasBarcode fields related to the form.

Metadata Sample:

```
{ "EditionDate": "2019-01-31T00:00:00Z", "ActivationDate": "2019-01-31T00:00:00Z", "ExpirationDate": "2022-01-31T00:00:00Z", "HasBarcode": false }
```

Parameter	Value	Description	Parameter Type	Data Type
formId	1-129	Form ID to add version to	path	string
content	D:\MSFormsManagement\Forms\spc Browse...	PDF form content	formData	file
metadata	2022-01-31T00:00:00Z, "HasBarcode": false }	Form version metadata	formData	Model Example Value

- d. **mappings:** Copy the contents of Mappings file and paste it in the mappings field in swagger as shown in below screenshots.

The screenshot shows a Swagger UI interface with a 'mappings' field. The field contains a large JSON array of form field definitions. The definitions include fields like familyName, givenName, middleName, companyName, careOfName, streetNumberName, unit, apt, flr, cityTown, state, province, postalCode, country, daytimePhone, mobilePhone, email, fei, taxNumber, ssn, classification, and various checkboxes for employment, continuation, concurrent, change of employer, and amended status.

Click on **Try it Out** and check if the response code is 201. Then, the form is updated successfully in azure.

Note: The latest PDF and mappings files are attached in the given zip folder.

11. Updating Form in CRM

- 1) To update the form in CRM, a new master form needs to be created.

SAVE SAVE & CLOSE + NEW FLOW FORM EDITOR

MASTER FORMS : INFORMATION

New Master Forms ☰ Owner* Test user1

General

Name* Form Logical Name*

Form Type

USCIS Published On*

USCIS Expires On*

Usage Type*

URL

CRM Form Id

Description

Fill the following details as given below:

- Name:** Select the name of the form from the option set.
 - Form Type:** Select “**Master Form**” from the option set.
 - USCIS Published On:** Fill it with EditionDate of the updated form.
 - USCIS Expires On:** Fill it with ExpirationDate of the updated form.
 - Usage Type:** Select “**Mostly**” from the option set.
- To fill the below two fields, open the entity related to that Form in CRM,
- Form Logical Name:** Fill this field with the logical name of the form entity. (e.g. mims_i129) for e.g. I-129

Solution MicrosoftLabs.D365MSI...

General Primary Field Controls

Entity Definition

Display Name* I-129

Plural Name* I-129

Name* mims_i129

Primary Image

Color

Description

Virtual Entity

Data Source [None]

Ownership* User or Team

Define as an activity entity.

Display in Activity Menus

Areas that display this entity

Service Settings Portals Voice of the Customer

Process

Business process flows (fields will be created) +

Communication & Collaboration

Feedback +

- CRM FORM Id:**
 - Open the forms tab of that entity as shown below and open the latest updated CRM Form.

Name	Form State	Form Type ↑	State	Customizable	Version
Information	Active	Card	Unmanaged	True	1.0.0.0
Information	Active	Main	Unmanaged	True	1.0.0.0
I129PubJan2019HTML	Active	Main	Unmanaged	True	1.0
Information	Active	Quick View F...	Unmanaged	True	1.0.0.0

2) Copy the URL of the form and get the GUID of the form from the URL as shown below.

In the URL select the formId parameter as shown below:

<https://mimsappsourcepotassium.crm.dynamics.com/main.aspx?appSolutionId=%7bDECC2746-99D3-488C-986E-87529B62CF25%7d&etc=10164&extraqs=formtype%3dmain%26formId%3d8AA3EADB-B904-4A26-A1E5-A3CE159C0C8A%26action%3d-1&pagetype=formeditor#467607898>

formId%3d8AA3EADB-B904-4A26-A1E5-A3CE159C0C8A%

Consider the highlighted portion as shown above.

GUID: 8AA3EADB-B904-4A26-A1E5-A3CE159C0C8A

So, the final master form looks like this:

MASTER FORMS : INFORMATION

New Master Forms ☰

General

Name *	I-129	Form Logical Name *	mims_i129
Form Type	Master Form		
USCIS Published On *	1/31/2019		
USCIS Expires On *	1/31/2022		
Usage Type *	Mostly		
URL		
CRM Form Id	8AA3EADB-B904-4A26-A1E5-A3CE159C0C8A		
Description		

Save the new master form (**Do not save and close**). A URL will be generated in the URL field. Once the URL is generated, save and close the form. The old master form changes to Inactive status.

SAVE + NEW DEACTIVATE DELETE ASSIGN SHARE EMAIL A LINK RUN WORKFLOW START DIALOG ...

MASTER FORMS : INFORMATION

I-129 ☰

Owner *
Test user1

General

Name *	I-129	Form Logical Name *	mims_i129
Form Type	Master Form		
USCIS Published On *	1/31/2019		
USCIS Expires On *	1/31/2022		
Usage Type *	Mostly		
URL	https://imsappforms6e949.azurewebsite:129/versions/2022-01-31/create		
CRM Form Id	8AA3EADB-B904-4A26-A1E5-A3CE159C0C8A		
Description		

Add this new master form to any master case configuration or a case directly and generate the form.