

Microsoft IT

Dynamics CRM
Forms Deployment Document



MICROSOFT LABS

JULY 26, 2019

Dynamics 365 Modern Immigration Management System

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

Contents

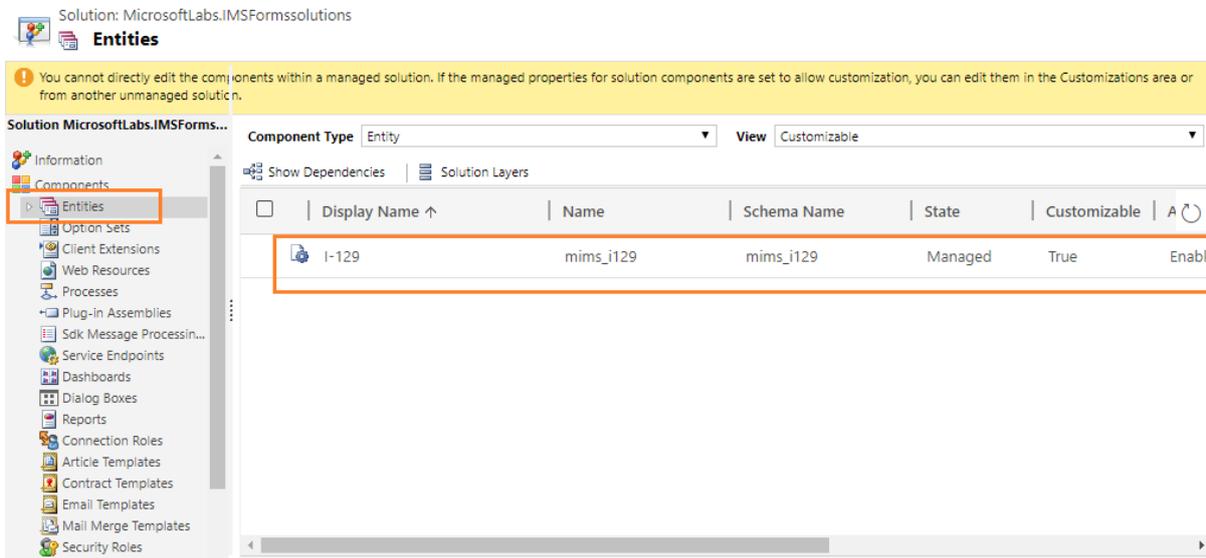
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1. Document Overview

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

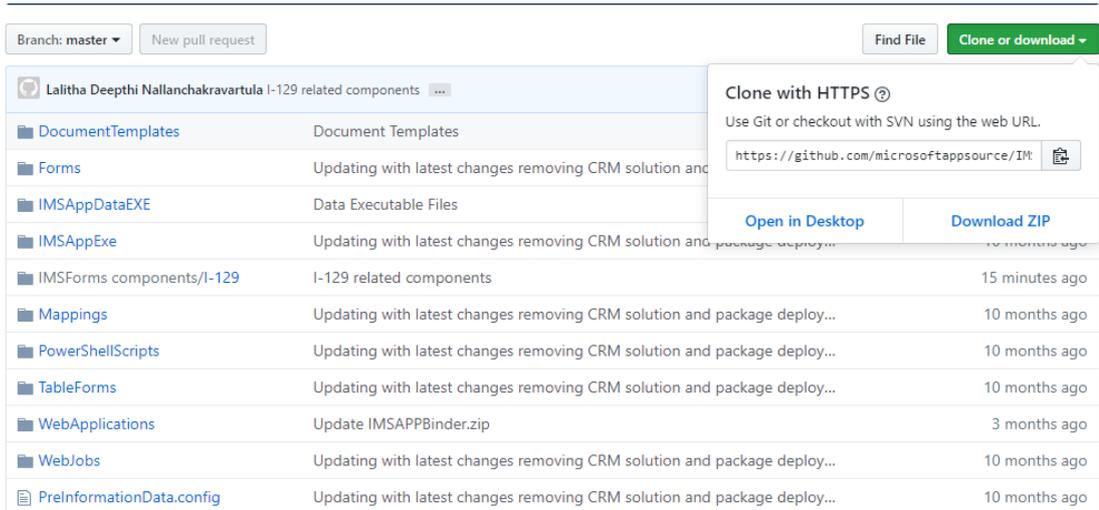
1. Open the **MicrosoftLabs.IMSFormssolutions** solution which will be installed through the appsource link of IMS application. Click on entities tab as shown in below screenshot.
2. Note down the entities that are present there (For e.g. I-129 is present in the solution, I-129 form must be updated).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



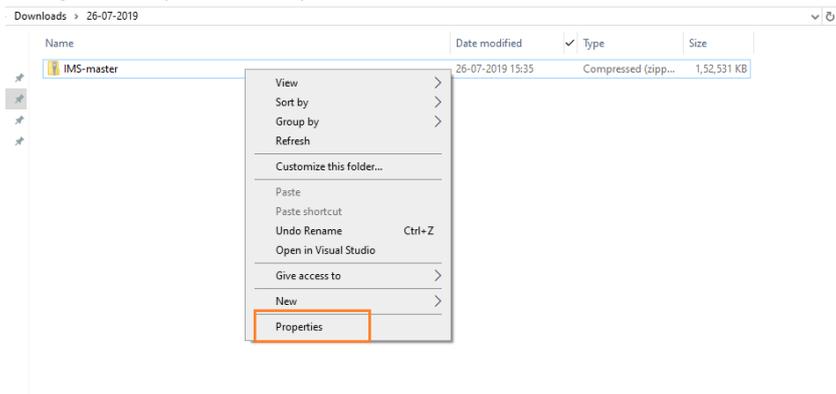
3. Go through the below link

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

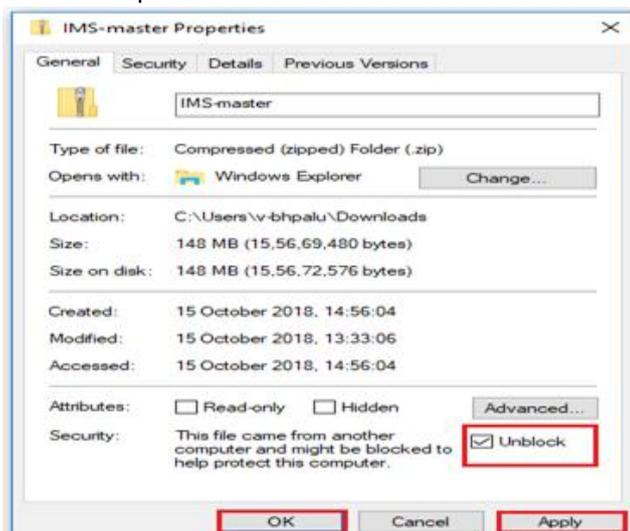
4. Download the components as shown below



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



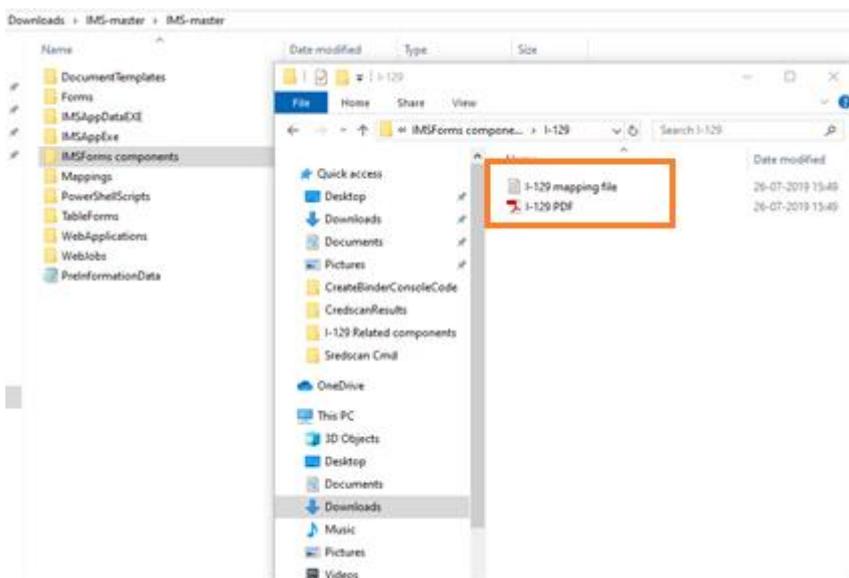
7. Click on Properties and check the unblock checkbox and click on "Ok" as shown below.



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.

Downloads > IMS-master > IMS-master

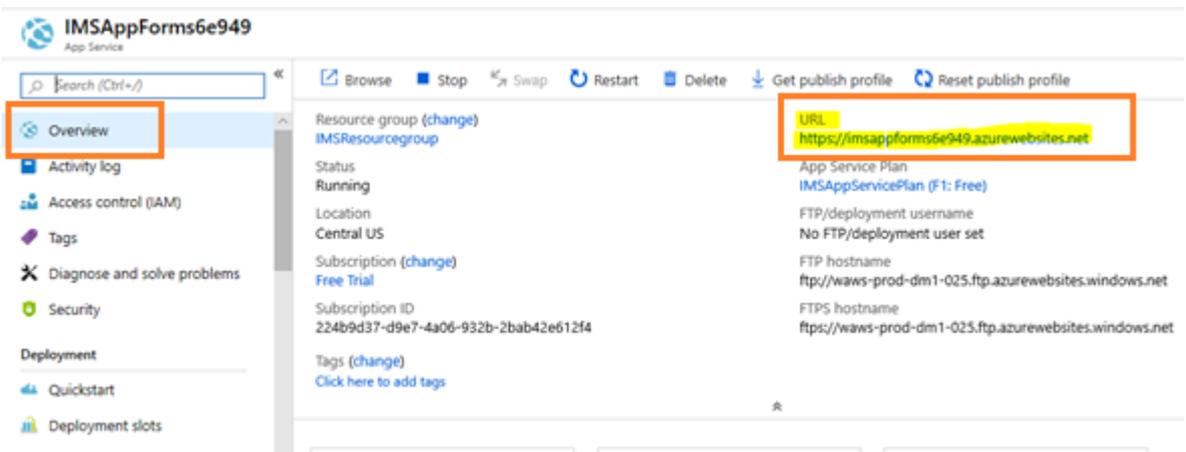
Name	Date modified	Type	Size
DocumentTemplates	23-04-2019 19:34	File folder	
Forms	23-04-2019 19:34	File folder	
IMSAppDataEXE	23-04-2019 19:34	File folder	
IMSAppExe	24-04-2019 12:33	File folder	
IMSForms components	26-07-2019 15:49	File folder	
Mappings	23-04-2019 19:34	File folder	
PowerShellScripts	23-04-2019 19:34	File folder	
TableForms	23-04-2019 19:34	File folder	
WebApplications	23-04-2019 19:34	File folder	
WebJobs	23-04-2019 19:34	File folder	
PreInformationData	23-04-2019 19:35	CONFIG File	1 KB



3. 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

4. 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

- 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

- 4) 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.
- 5) 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		

[Try it out!](#)

- 6) 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	(required)	Form ID to add version to	path	string
content	<input type="text" value="Browse..."/>	PDF form content	formData	file
metadata	(required)	Form version metadata	formData	Model
mappings	<input type="text"/>	Form version mappings	formData	string

```

{
  "EditionDate": "2019-07-08T04:55:57.768Z",
  "FormId": "string",
  "ActivationDate": "2019-07-08T04:55:57.768Z",
  "ExpirationDate": "2019-07-08T04:55:57.768Z",
  "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		

[Try it out!](#)

- 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 }

```

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

Parameters

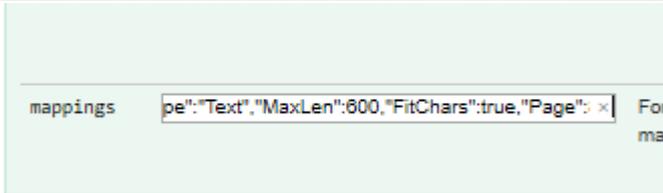
Parameter	Value	Description	Parameter Type	Data Type
formId	I-129	Form ID to add version to	path	string
content	D:\MSFormsManagement\Formspsc <input type="text" value="Browse..."/>	PDF form content	formData	file
metadata	2022-01-31T00:00:00Z, "HasBarcode": false }	Form version metadata	formData	Model

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

```

File Edit Format View Help
[{"Name":"Line1_FamilyName","Type":"Text","MaxLen":50,"FitChars":true,"Page":1,"mims_1129_p1f1_givenname":{"Name":"Line1_GivenName
[0]","Type":"Text","MaxLen":50,"FitChars":true,"Page":1,"mims_1129_p1f1_middlename":{"Name":"Line1_MiddleName
[0]","Type":"Text","MaxLen":50,"FitChars":true,"Page":1,"mims_1129_p1f2_companyname":{"Name":"Line3_CompanyOrOrgName
[0]","Type":"Text","MaxLen":255,"FitChars":true,"Page":1,"mims_1129_p1f3_incareofname":{"Name":"Line7a_IncareofName
[0]","Type":"Text","MaxLen":700,"FitChars":true,"Page":1,"mims_1129_p1f3_streetnumbername":{"Name":"Line7b_StreetNumberName
[0]","Type":"Text","MaxLen":250,"FitChars":true,"Page":1,"mims_1129_p1f3_apt":{"Name":"Line3_Unit
[1]","Type":"Checkbox","MaxLen":0,"FitChars":true,"Page":1,"Options":{"100000000":"APT"},"mims_1129_p1f3_ste":{"Name":"Line3_Unit
[0]","Type":"Checkbox","MaxLen":0,"FitChars":true,"Page":1,"Options":{"100000000":"SITE"},"mims_1129_p1f3_flr":{"Name":"Line3_Unit
[2]","Type":"Text","MaxLen":0,"FitChars":true,"Page":1,"Options":{"100000000":"FLR"},"mims_1129_p1f3_aptstefirnumber":{"Name":"Line3_aptStefirNumber
[0]","Type":"Text","MaxLen":50,"FitChars":true,"Page":1,"mims_1129_p1f3_citytown":{"Name":"Line3_CityTown
[0]","Type":"Text","MaxLen":100,"FitChars":true,"Page":1,"mims_1129_p1f3_state":{"Name":"P1_Line3_State
[0]","Type":"Combobox","MaxLen":0,"FitChars":true,"Page":1,"Options":
{"100000000":"AK","100000001":"AL","100000002":"AR","100000003":"AZ","100000004":"CA","100000005":"CO","100000006":"CT","100000007":"DE","100000008":"FL","100000009":"
GA","100000010":"HI","100000011":"IA","100000012":"ID","100000013":"IL","100000014":"IN","100000015":"KS","100000016":"KY","100000017":"LA","100000018":"MA","100000019"
:"MD","100000020":"ME","100000021":"MI","100000022":"MN","100000023":"MO","100000024":"MS","100000025":"MT","100000026":"NC","100000027":"ND","100000028":"NE","100000
029":"NH","100000030":"NJ","100000031":"NM","100000032":"NV","100000033":"NY","100000034":"OH","100000035":"OK","100000036":"OR","100000037":"PA","100000038":"PR","100
000039":"RI","100000040":"SC","100000041":"SD","100000042":"TN","100000043":"TX","100000044":"UT","100000045":"VA","100000046":"VT","100000047":"WA","100000048":"WI","100
000049":"WV","100000050":"WY"},"mims_1129_p1f3_zipcode":{"Name":"P1_Line3_ZipCode
[0]","Type":"Text","MaxLen":50,"FitChars":true,"Page":1,"mims_1129_p1f3_province":{"Name":"P1_Line3_Province
[0]","Type":"Text","MaxLen":100,"FitChars":true,"Page":1,"mims_1129_p1f3_postalcode":{"Name":"P1_Line3_PostalCode
[0]","Type":"Text","MaxLen":100,"FitChars":true,"Page":1,"mims_1129_p1f4_daytimephone":{"Name":"Line2_DayTimePhoneNumber_Part8
[0]","Type":"Text","MaxLen":50,"FitChars":true,"Page":1,"mims_1129_p1f4_mobilephone":{"Name":"Line3_MobilePhoneNumber1_Part8
[0]","Type":"Text","MaxLen":50,"FitChars":true,"Page":1,"mims_1129_p1f4_email":{"Name":"Line9_EmailAddress
[0]","Type":"Text","MaxLen":250,"FitChars":true,"Page":1,"mims_1129_p1f5_feln":{"Name":"TextField1
[0]","Type":"Text","MaxLen":50,"FitChars":true,"Page":1,"mims_1129_p1f6_irstaxnumber":{"Name":"Line2_TaxNumber
[0]","Type":"Text","MaxLen":50,"FitChars":true,"Page":1,"mims_1129_p1f5_ssn":{"Name":"Line4_SSN
[0]","Type":"Text","MaxLen":25,"FitChars":true,"Page":1,"mims_1129_p2f1_classification":{"Name":"Part2_ClassificationSymbol
[0]","Type":"Combobox","MaxLen":0,"FitChars":true,"Page":2,"Options":
{"100000000":"E3","100000001":"F1","100000002":"H1B","100000003":"H1B1","100000004":"I1","100000005":"L1A","100000006":"L1B","100000007":"O1","100000008":"TN"},"mims
1129_p2f2a_newemployment":{"Name":"new[0]","Type":"Checkbox","MaxLen":0,"FitChars":true,"Page":2,"Options":{"100000000":"I1"},"mims_1129_p2f2b_continuation":{"
Name":"continuation[0]","Type":"Checkbox","MaxLen":0,"FitChars":true,"Page":2,"Options":{"100000000":"I1"},"mims_1129_p2f2c_previouschange":{"Name":"previouschange
[0]","Type":"Checkbox","MaxLen":0,"FitChars":true,"Page":2,"Options":{"100000000":"I1"},"mims_1129_p2f2d_concurrent":{"Name":"concurrent
[0]","Type":"Checkbox","MaxLen":0,"FitChars":true,"Page":2,"Options":{"100000000":"I1"},"mims_1129_p2f2e_changeofemployer":{"Name":"change
[0]","Type":"Text","MaxLen":0,"FitChars":true,"Page":2,"Options":{"100000000":"I1"},"mims_1129_p2f2f_amended":{"Name":"amended
[0]","Type":"Text","MaxLen":0,"FitChars":true,"Page":2,"Options":{"100000000":"I1"},"mims_1129_p2f2f_receiptnumber":{"Name":"Line1_ReceiptNumber
[0]","Type":"Text","MaxLen":75,"FitChars":true,"Page":2,"mims_1129_p2f2a_notify":{"Name":"P2Checkbox

```



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.

5. 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.

e. **Usage Type:** Select “**Mostly**” from the option set.

To fill the below two fields, open the entity related to that Form in CRM,

f. **Form Logical Name:** Fill this field with the logical name of the form entity. (e.g. mims_i129) for e.g. I-129

The screenshot shows the 'Entity Definition' configuration for the 'I-129' entity. The 'Name' field is highlighted with an orange box and contains the value 'mims_i129'. Other fields include 'Display Name' set to 'I-129', 'Plural Name' set to 'I-129', and 'Ownership' set to 'User or Team'. The 'Primary Image' field is empty, and the 'Color' field is set to a green color. The 'Description' field is empty. The 'Areas that display this entity' section includes checkboxes for 'Service', 'Settings', 'Portals', and 'Voice of the Customer'. The 'Process' section includes a checkbox for 'Business process flows (fields will be created)'. The 'Communication & Collaboration' section includes a checkbox for 'Feedback'.

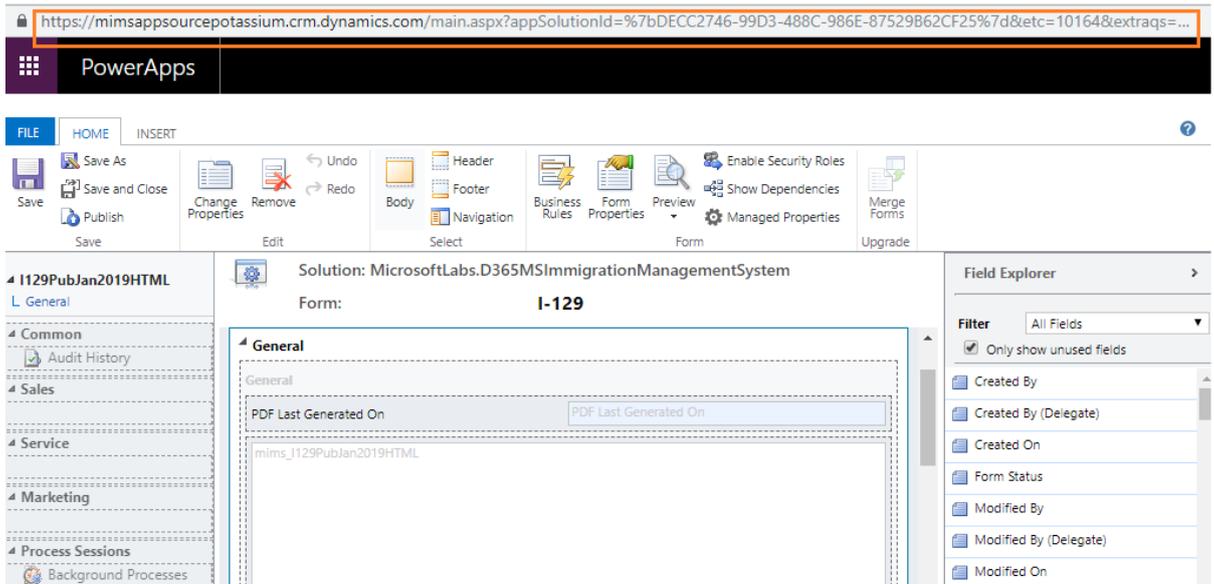
g. **CRM FORM Id:**

1) Open the forms tab of that entity as shown below and open the latest updated CRM Form.

The screenshot shows the 'Forms' tab for the 'I-129' entity. The 'Active Forms' table is displayed with the following data:

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=...>

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	[Empty field]		
CRM Form Id	8AA3EADB-B904-4A26-A1E5-A3CE159C0C8A		
Description	[Empty field]		

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.