data8 email verification & phone validation installation guide & documentation

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About

The Data8 Validation solution adds Data8's email validation and telephone validation services into the forms of Dataverse/Dynamics 365 CE, ensuring that contact details are validated on entry to improve your data quality and user experience. It also introduces the ability to go back and historically look at your existing data and analyse that in order to see your data hygiene levels.

For the solution to function, you must have a Data8 account with access to the Email Validation and/or Phone Validation services. If you do not already have an account, you can register for a free trial online at https://www.data-8.co.uk/register.

Obtaining an API Key

Go to https://www.data-8.co.uk/dashboard/api-keys/ and click "Add API Key". Give the API key a friendly name before pressing save.

Once the key is saved, you are able to add a "Domain" to the "Allowed Domains". Enter the domain name of your Dataverse/Dynamics 365 instance and click "Add".

Store this key somewhere as this is your "Client Side" Key.

You then need to create a second key but DO NOT add a domain to it – this will be your "Server Side" key. You'll need both of these shortly.

Installing the solution

Note: If you installed the solution from AppSource then this step will have been completed for you.

You will have been provided with a zip file containing the solution. To install it, open https://make.powerapps.com, ensure you're in the right environment in the top right of the page and navigate to "Solutions" on the bottom of the left nav bar.
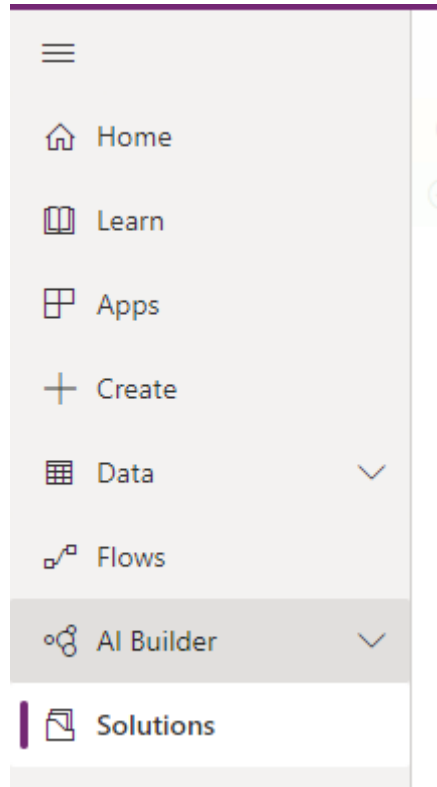
Click "Import" and select the zip file you have been sent, and then click "Next".

Click "Next" again and the solution will be imported.

Click "Close" and the solution has now been imported.

Initial Configuration of the solution

Once install, navigate to your list of "Apps" and open the "Data8 Validation Configuration" model driven app.
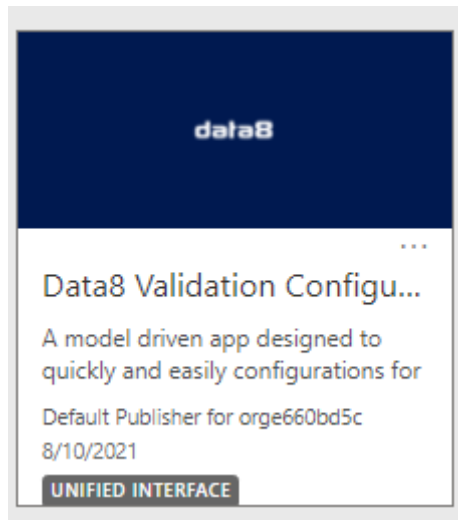
You will be shown a screen to enter both your keys you made earlier and "Save All Settings".

General Settings

Server Side API Key	Client Side API Key
KMLM-WWFL-QYYR-P9H5	495V-D8VF-9YTF-TIUX

You will now need to configure each validation element separately.

Configuring Phone Validation

Phone Validation Settings

Phone Validation

General Settings

Enter the international dialling code to assume when a number doesn't have one explicitly, e.g. "1" to assume numbers are in North America, 44 for UK, 33 for France etc. Any number entered with explicit country code e.g. "+44 151 355 4555" will be validated according to that country code, others will use the country code entered here.

Default Telephone Validation Country Code

442 🌐

Show Invalid Telephones As

Error ⌄

Mapping Configuration

Reconfigure your existing or create a new set of mappings

Contact
Reconfigure

Add a phone validation mapping for

Select an entity ⌄   **Add**

Save

Telephone numbers are validated according to different rules for different countries. If a telephone number contains a full international code, the country will be determined from the number itself. If no international dialling code is specified, the country entered in the Default Telephone Validation Country Code setting is assumed.

This defaults to 44. If you are outside of the UK you will want to change this to the international dialling code for your country (e.g. 1 for US, 33 for France etc.) so that telephone numbers are validated according to the rules for the correct country.

Once your global settings are set up, you need to configure column by column mappings in order to store the validation results.

Table Phone Validation Setup

From this page, select the table name you wish to configure (i.e. Contact) and click "Add". This will redirect you.

Data8 Phone Validation Mapping

Configuration for Contact

Select the fields that you wish to validate and specify where you want to store the results and time stamp

Existing Mappings

mobilephone	crf3a_mobilephonevalid	crf3a_mobilephonelastchecked	Delete
telephone1	crf3a_telephone1valid	crf3a_telephone1lastchecked	Delete
telephone2	crf3a_telephone2valid	crf3a_telephone2lastchecked	Delete

Add New Mappings

Source Fields are the existing fields within your syst... ...te must be stored as a "Single line of text field" with a format of 'Phone Number'.
Target Fields must be a "Choice" field, made with th... ...ation Status' - we do not provide these fields. You can either make the fields yourself through the maker portal or select "C... ...e the fields yourself through the maker portal or select "Create a new
Last Checked Fields must be a "DateTime" field - w...
field" option.

address1 telephone 1 valid (crf3a_address1...
Business Phone 2 Validation Result (new_bu...
Callback Number Validation Result (new_cal...
Telephone 3 Validation Result (crf3a_teleph...
Create a new field

| **Source Field** | **Target Field** | **Last Checked** | |
| Home Phone 2 (home2) | Select Target Field | Select Last Checked Field | Save |

By default you will have no mappings so you'll need to add a new mapping. This is defined like so:

Source Field:
The source column of the telephone number you wish to validate.

Target Field:
The column in which you wish to store the validation result in. This field needs to be a "choice" with the choice named called "*data8_telephonevalidation_status*". Alternatively, you can select "Create a new field" and allow the page to create the field for you.

Last Validated:
This is an optional column for you to store when the phone number was validated to keep your data quality up to date. Alternatively you can select "Create a new field" and allow the page to create the field for you.

Once you have selected your values, click "Save" before repeating for all other phone fields. Each time you "Save", the mapping will move to "Existing Mappings".

Configuring Email Validation

Email Validation Settings

Email Validation

General Settings

Email Validation Level | Show Invalid Emails As
Select an option ⌄ | Error ⌄

☑ Suggest Email Address Corrections

Mapping Configuration
Reconfigure your existing or create a new set of mappings

| Account | Contact |
| Reconfigure | Reconfigure |

Add a phone validation mapping for

Select an entity ⌄ | **Add**

Save

Email addresses are validated to the level specified on this page:

- **Syntax** ensures only that the email address is in the correct format. This is the fastest level of validation but will allow through the most invalid email addresses.
- **Domain** ensures that the domain name (to the right of the @ sign) is valid and is configured to accept email. This is normally the best level in terms of speed and accuracy.
- **Server** ensures that there is an email server currently live and ready to accept email for the domain. This will eliminate dormant domains but increases the time required to perform the validation.
- **Address** ensures the mail server accepts email for the exact mailbox. This is the most precise level of validation but does have a false positive rate, especially for consumer email addresses.

With the Suggest Email Address Corrections box checked, misspelt email addresses can be corrected automatically.

Table Email Validation Setup

From this page, select the table name you wish to configure (i.e. Contact) and click "Add". This will redirect you.

Data8 Email Validation Mapping   ×

Configuration for Account

Select the fields that you wish to validate and specify where you want to store the results and time stamp

Existing Mappings

| emailaddress2 ⌄ | new_emailaddress2validationresult ⌄ | new_emailaddress2lastchecked1 ⌄ | Delete |
| emailaddress1 ⌄ | crf3a_emailaddress1valid ⌄ | lastusedincampaign ⌄ | Delete |

Add New Mappings

Source Fields are the existing fields within your system containing data - anything you wish to validate must be stored as a "Single line of text field" with a format of 'Email'.
Target Fields must be a "Choice" field, made with the provided global choice called 'Email Validation Status' - we do not provide these fields. You can either make the fields yourself through the maker portal or select "Create a new field" option.
Last Checked Fields must be a "DateTime" field - we do not provide these fields. You can either make the fields yourself through the maker portal or select "Create a new field" option.

| **Source Field** | **Target Field** | **Last Checked** | |
| Email Address 3 (emailaddress3) ⌄ | Select Target Field ⌄ | Select Last Checked Field ⌄ | Save |

By default you will have no mappings so you'll need to add a new mapping. This is defined like so:

Source Field:
The source column of the email address you wish to validate.

Target Field:
The column in which you wish to store the validation result in. This field needs to be a "choice" with the choice named called "*data8_emailvalidation_status*".

Last Validated:
This is an optional column for you to store when the email address was validated to keep your data quality up to date.

Once you have selected your values, click "Save" before repeating for all other phone fields. Each time you "Save", the mapping will move to "Existing Mappings".

Making the validation work

For the real time validation to work, you need to make a few form amendments. Starting at https://make.powerapps.com go through your normal process to amend a form.

Select "Form Libraries" on the left-hand side and add the "data8_validation_base.js" library to your form.
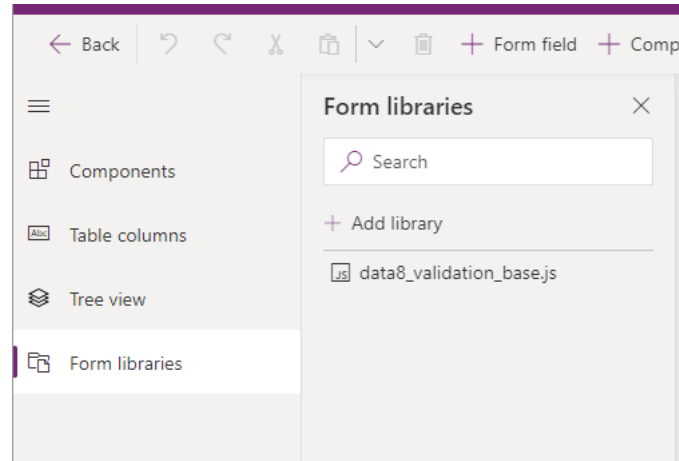
Once this is added, add an event handler to the "On Load" event of your form called data8_validation_start, ensuring the execution context is passed as the first parameter.
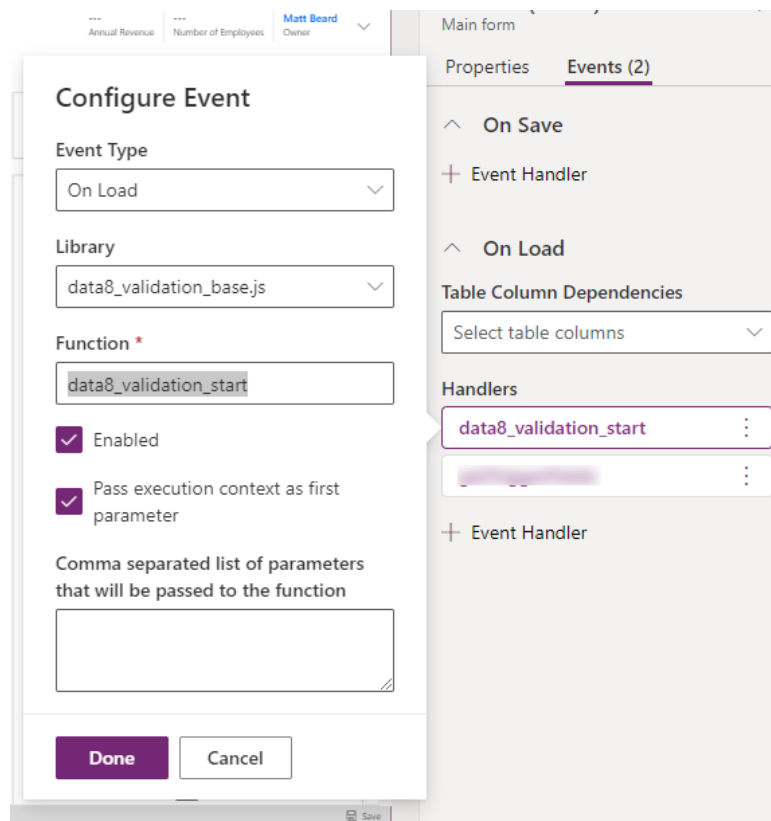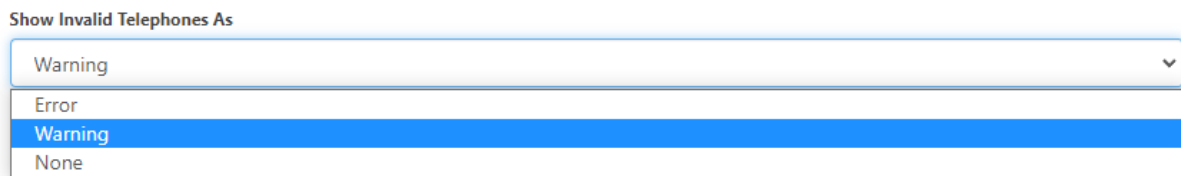

Save and publish your form and it should immediately begin working. You can optionally add the target columns and last checked columns if you wish, although this is optional.

Setting the Error Level

Within the configuration page of the "Data8 Validation Configuration" app you can specify behaviour experienced when an invalid piece of data is input. By both telephone and email, you will see a dropdown box:
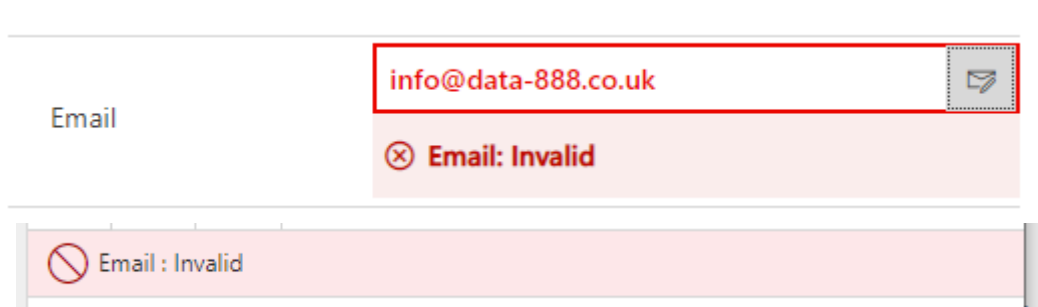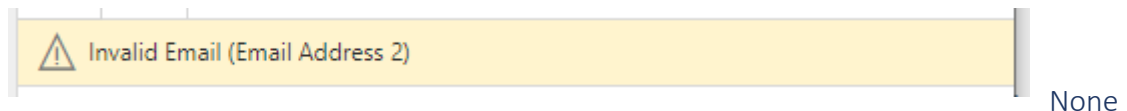

Error

Error will prevent the saving of the form and give an alert next to the invalid field, as well as on the top of the form on save.

Warning

Warning will give an alert at the top of the page of any invalid data. This will not prevent the user saving.

None

There will be no prompt on the screen, however the fields that store the valid status will still be automatically updated.

Overriding on a Form by Form basis

The options above as for a global set up and each table using the validation will adhere to that configuration, however you can override this on particular forms during the event handler set up.

The overrides are always specified as "Telephone Override", "Email Override". If you only want to override one type, leave the other one blank so for example, the following image would leave Telephone as it's global setting but override Email on this form to be "Warning" instead.

Running Validation in batch

The batch validation works first by performing a count of the records that need to be checked and asking for your authorisation to charge that many credits to your account. You will be warned before you are billed.

Pre-Requisites

We need to be able to connect to your CRM for the solution to work correctly. Please enter your connection details at https://www.data-8.co.uk/Dashboard/CrmConnections.

When registering your connection, you will be given an option of using either a user account or an application user. Please assign the relevant security permissions to whichever user you have opted to use.

At minimum we will need the "Data8 Validation Batch" role. On top of that, we will need relevant permissions to perform the actions you want us to perform (i.e. if you are batch validating contacts, we would need applicable permissions for contacts).

Creating a job

To run the validation in batch, you need to reopen the Data8 Validation Configuration model driven app. Here you will notice the "Batch Validation" area on the left-hand side.
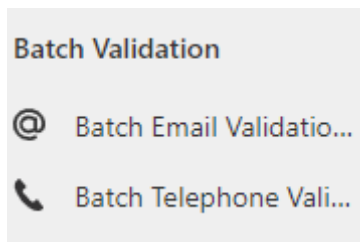
Depending on whichever type you wish to run and select that table. For the demo we will go with email.

Start by creating a new row in that table.

You need three fields here:

Job Name:

This is a friendly name for your reference.

Entity Name:

This is the logical name of the table you wish to check. Any existing mappings will be used (as defined earlier).
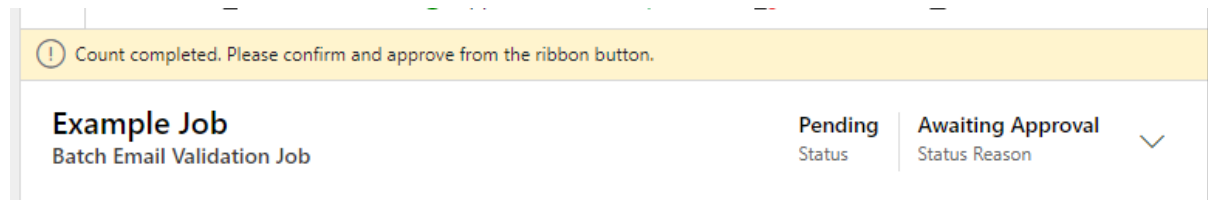
Saved View Filter:

You may not want to revalidate all your rows – this is a saved view option to allow a subset. For example, you may have a saved view of "Unvalidated Email Addresses" so you would just type that in. If left blank, all rows will be validated.

Enter the details and save the row and you will see an alert

> (!) Please wait a few minutes for Data8 to pick up your request
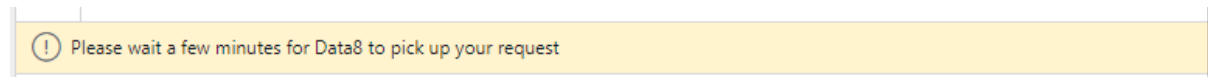
This is contacting our servers to let us know of your request. Once we have picked up your job, the form will change.

> (!) Count completed. Please confirm and approve from the ribbon button.

> **Example Job**
> Batch Email Validation Job
>
> Pending · Awaiting Approval
> Status · Status Reason
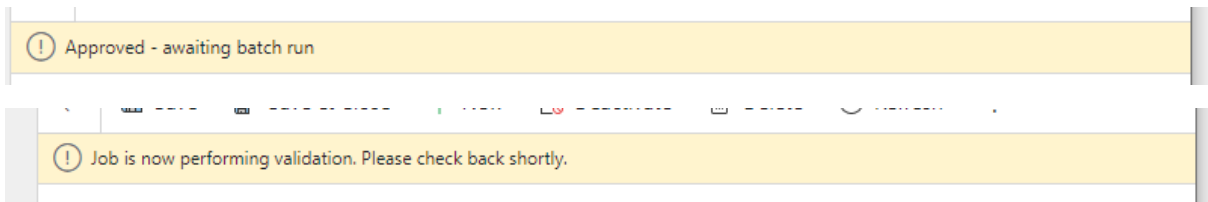
A new section will also be visible showing you how many emails you have and will need to validate.

Audit Results

Unique Email Count	17		
		Count Completed On	8/10/2021 🗓
			5:26 PM 🕐

If you are happy with those values, click "Approve Count" in the ribbon. At this point, you will be asked to confirm – this is the moment you will be charged credits.
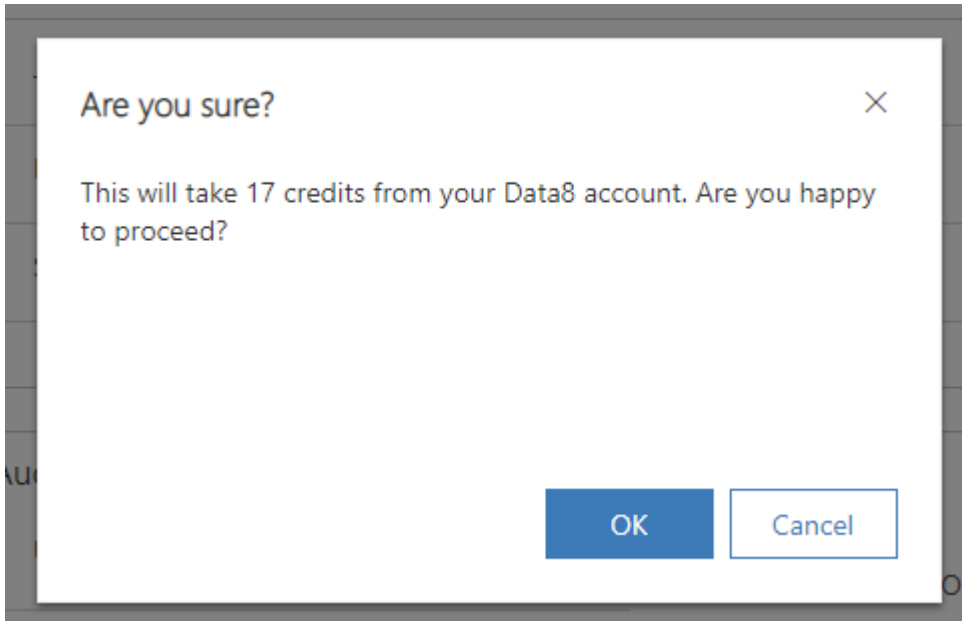
Once approved, the form will change again

Once complete, a final new section will be visible showing your top-level statistics. If you also go and look at the rows in the table, you'll see the status fields are all now populated, as are the last checked dates (if configured).