Created by MyCRM Ltd

eNumber 2016

User Guide

Introduction

eNumber for Dynamics CRM 2016 and Dynamics 365 for Sales provides a significant enhancement by providing the ability to be able to create Auto Numbers and Auto Names that automatically populate fields within CRM records.

It's not just a number thing...

eNumber is much more than generating the next available number to pre-populate the field.

With eNumber you don't even have to generate an Auto Number as part of the result, the flexibility is there to allow you to choose your outcome.
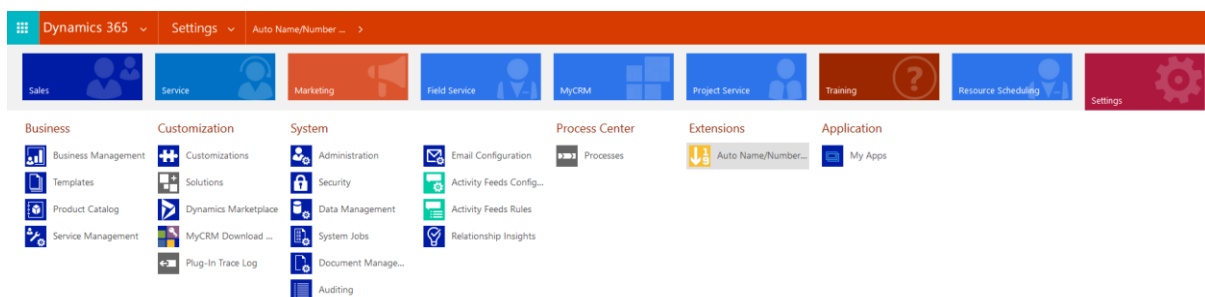
After reading through this guide you should become very familiar with how to use eNumber and gain an insight into the many possibilities that are available when using eNumber.

Installation

If you have not already done so, get a trial of eNumber from our Download Centre and follow the instructions there. https://downloads.mycrmgroup.com/Products/2016/eNumber/get-trial

GET TRIAL

First, you will need to download and manually install our Download Centre Application (all the instructions are in the link above). This solution allows you to install and licence any of our products available for your version of CRM.

Once eNumber is installed, the "Auto Name/Number Rules" entity will be available under **Settings**

Contents

Rule Types

You can create three different type of eNumber Rules.

Single Entity Name/Number

This is the main type of Rule you will use in eNumber. It is used for creating a rule against a single entity that will run when a record is created and optionally when updated.

Business Process Entity Name/Number

Business Process rules are for use in Business Processes (Workflows) only and as such, will not run on the normal create and update of a record as you would with a Single Entity rule. Instead, the rule will run as part of a workflow where certain conditions you define will need to be met before the rule is run.

The Business Process rule is created in exactly the same way as the Single Entity rule; the only difference is that you will not be able to target attributes that are only available for a Create message, as the Business Process rule will be updating the record. An example of this would be the attribute "Case Number" (ticketnumber) on the Case entity.

Global Number

The Global Number rule type is used as a holding record to hold the Next Number in the sequence. Global Numbers are used for generating a unique number across multiple entity types. For example if you wanted to have a unique number for your Customers, whether they are an Account, a Contact or a Lead, then you would use a Global Number rule type to hold this value. You can then use this Global Number rule in your other rules. An example of this will be available later in the document.
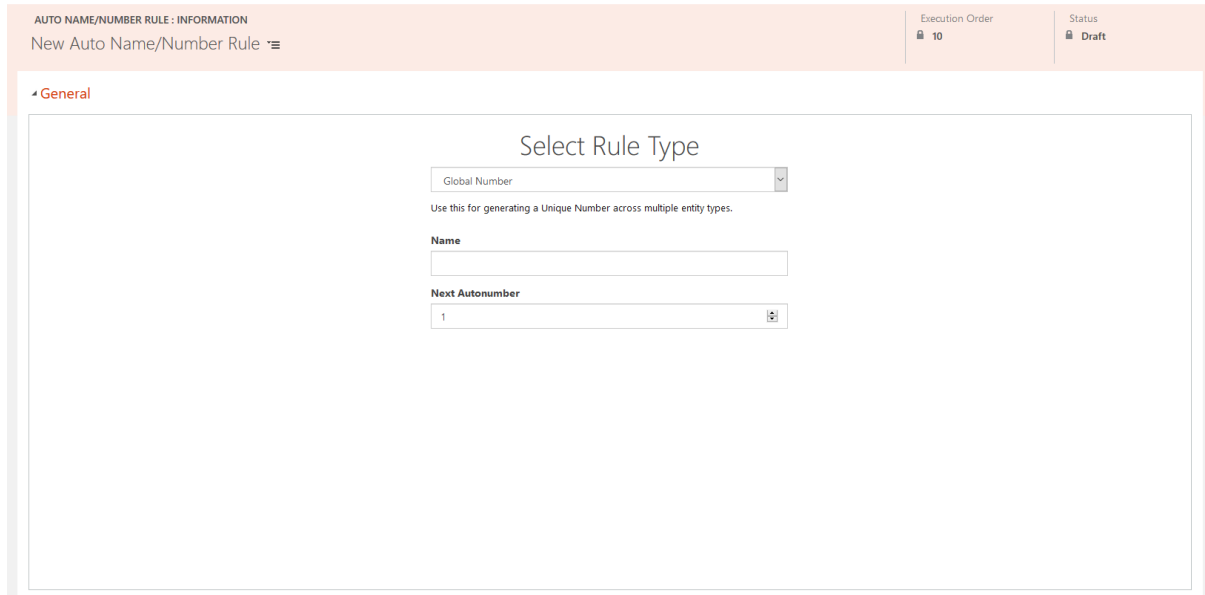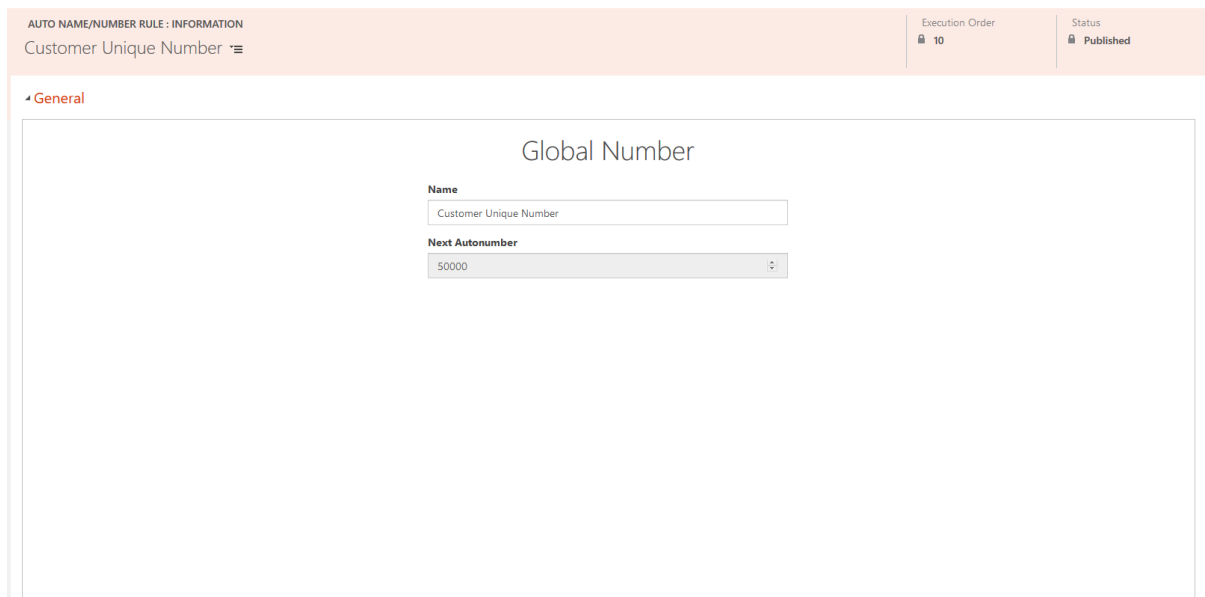
Creating a new Rule

When creating a new Rule the first thing you will need to do is select the Rule Type.

Global Number

To create a Global Number you need to enter a **Name**, which can be used later when adding a Global Number Rule Part to other Auto Name/Number Rules, and the **Next Autonumber** to be used.
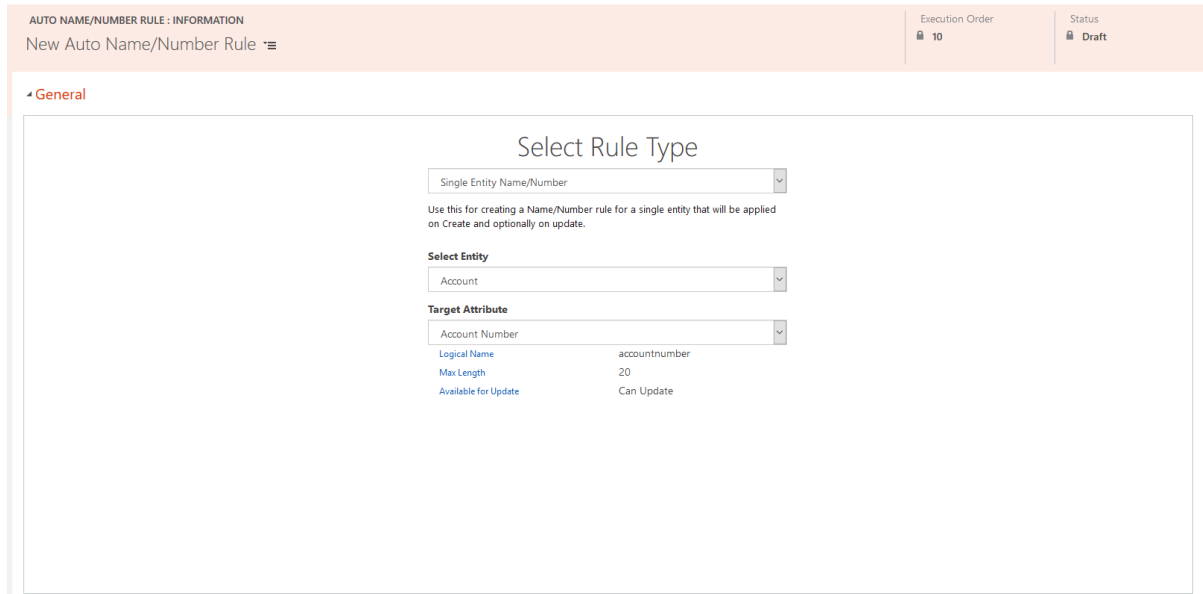

Once filled out, click **Save** from the command bar. This is all that is required when setting up a Global Number Rule and once saved the Rule will automatically be published.

Single Entity Name/Number

To create a Single Entity Name/Number rule, create a new **Auto Name/Number Rule** by clicking on the **NEW** command bar button and then ensuring that the Rule Type "Single Entity Name/Number" is selected.

Next, select the **Entity** you want the rule to run against. Once selected, the **Target Attribute** dropdown control is populated with the available fields that you can save the result of your **rule** to. Please note these will only be those of type **String**/text, as the result of running the rule will only produce a string output.

After selecting your **Target Attribute,** some useful details about the attribute are displayed.

- **Logical Name** – This is the logical name of the attribute, which will never change in CRM, whereas the Display Name is changeable.
- **Max Length** – This is the maximum number of characters that can be saved into the attribute. This may be customisable in case you have a need to change to this.
- **Available for Update** – This will show whether the attribute can be updated. For most cases you can update the field, but for others like Case Number on the Case entity you can only populate the field during the Create of the record. If this is the case, you will only ever be able to run the rule on Create and will not be able to use in a Business Process rule.

Once the chosen **Entity** and **Target Attribute** has been selected, save the rule using the **SAVE** button on the command bar.

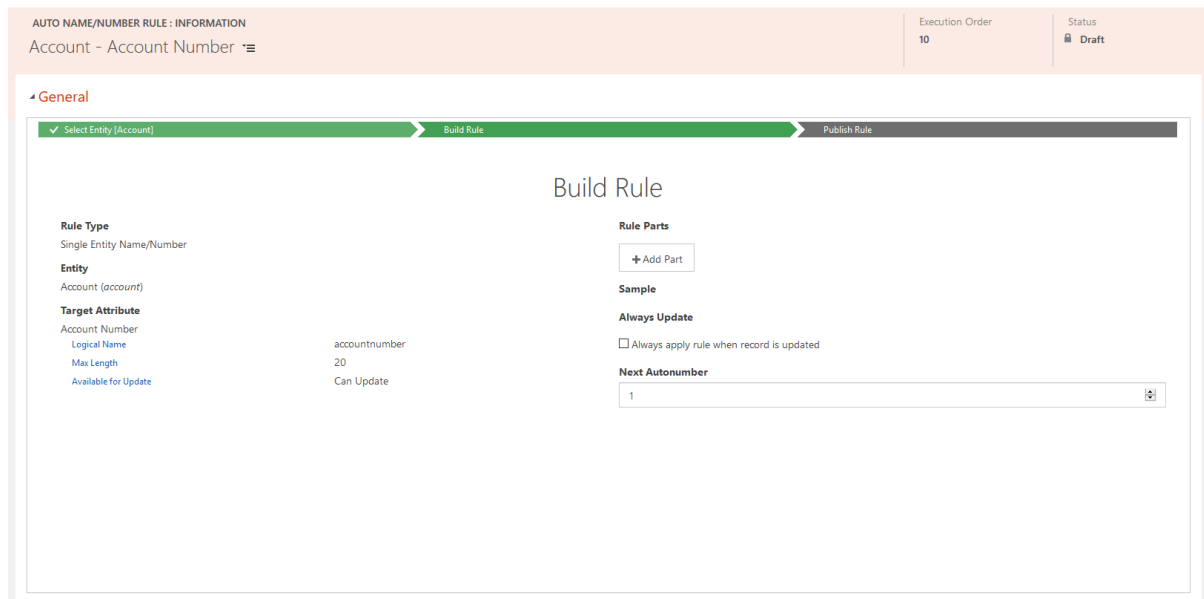> NOTE: Once the rule has saved you will not be able to change the Entity and Target Attribute.

Business Process Entity Name/Number

The process is identical to the Single Entity Name/Number as described above. The only noteworthy difference is that you will not be able to create the rule when the **Target Attribute** is available only for the Create of the record.

Building a Rule

Please Note this is not applicable to Global Number rules.

Once you have saved a new rule the page will refresh and show you the **Build Rule** screen as below.

On the left side of the screenshot is the information we have already selected and saved: - the **Rule Type**, the **Entity** and the **Target Attribute** along with the additional information about it.

On the right side of the screenshot is the area where we build our rules.

To build our rules we add **Rule Parts**, which combine in sequence to generate the desired output that saves to our **Target Attribute**.

To add new Rule Parts, click on the Add Part button as shown below.
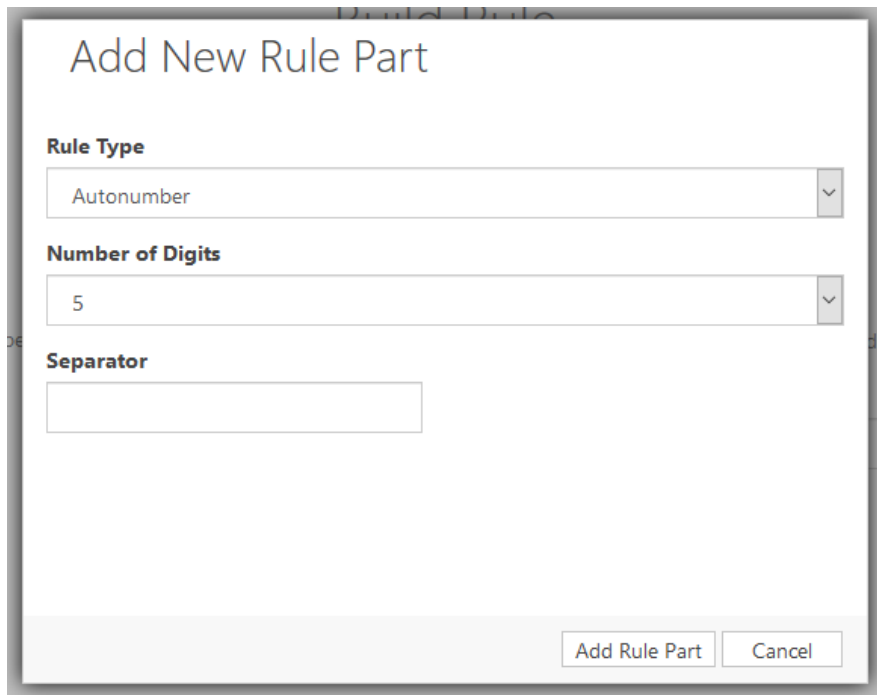
Rule Parts

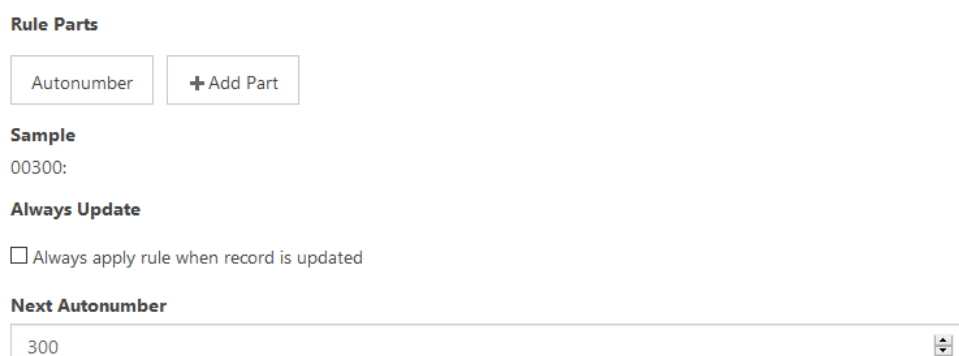Rule Parts can be one of the following types:

Autonumber

The **Autonumber** Rule Type outputs the **Next Autonumber** as a string with '0' padding to the **Number of Digits** selected. For example:

Next Autonumber	Number of Digits	Output
1	5	00001
4321	3	4321
10	3	010

Separator : The Separator allows you to enter one or more characters of text to separate this Rule Part with the next.

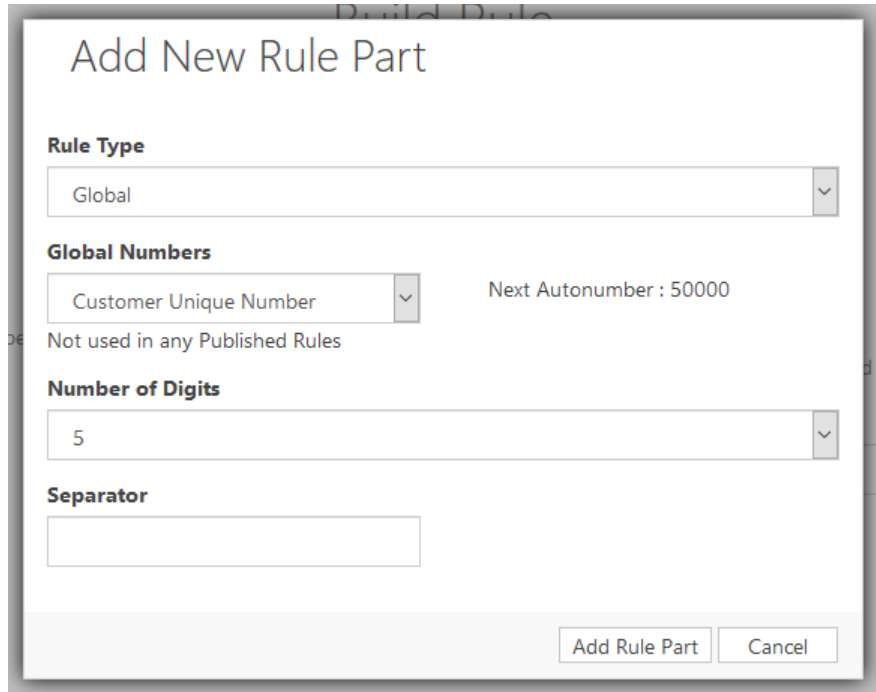*Example of Autonumber Rule Part with colon ':' as the separator*

Global

The **Global** Rule Type is used in the same way as the normal Autonumber Rule Part with the difference being the **Next Autonumber** used comes from our **Global Rule** instead of the current Auto Name/Number Rule.
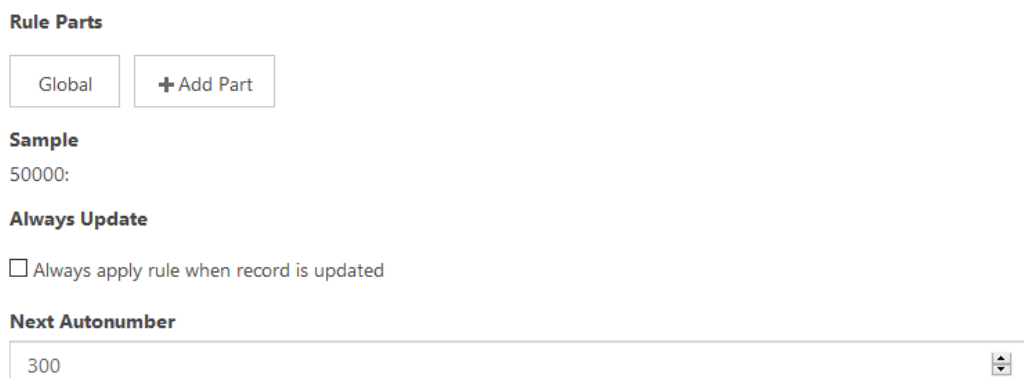

When the **Global** Rule Type is selected, the list of Global Numbers is shown. Here you can select any of the Global Number rules.

It will display how many, if any, Published Rules (Single Entity/Business Process) the Global Number rule is used in.
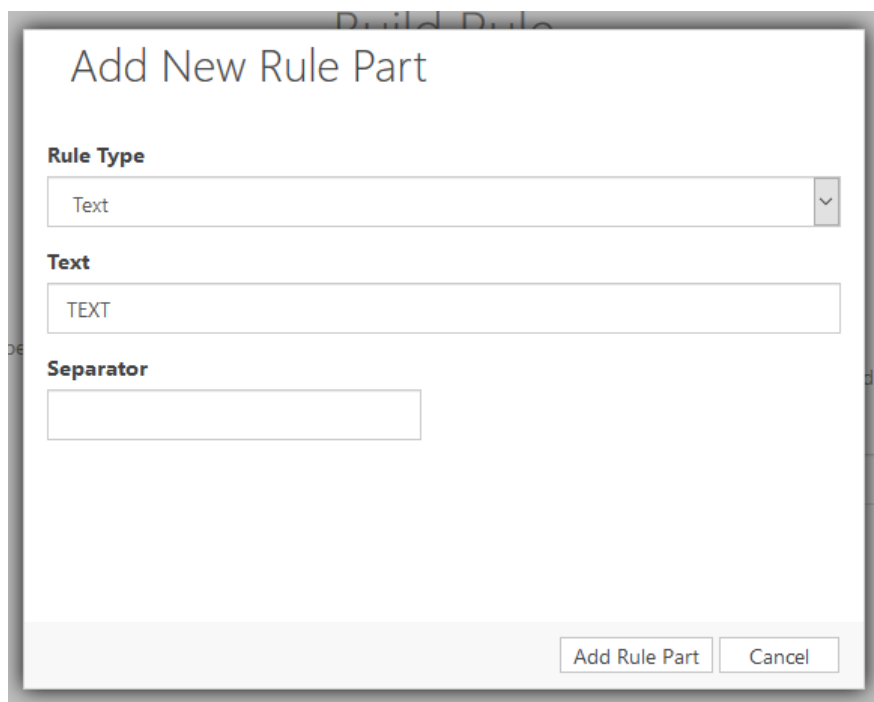
It will also display the Next Autonumber for the Global Number rule.

Text

The **Text** Rule Type inserts whatever text entered in the **Text** field into your Rule.

Add New Rule Part

Rule Type

Text

Text

TEXT

Separator

Add Rule Part   Cancel

The following shows the Text rule part added to the previous Global rule part.

Build Rule

Rule Parts

Global   Text   + Add Part

Sample

50000:TEXT

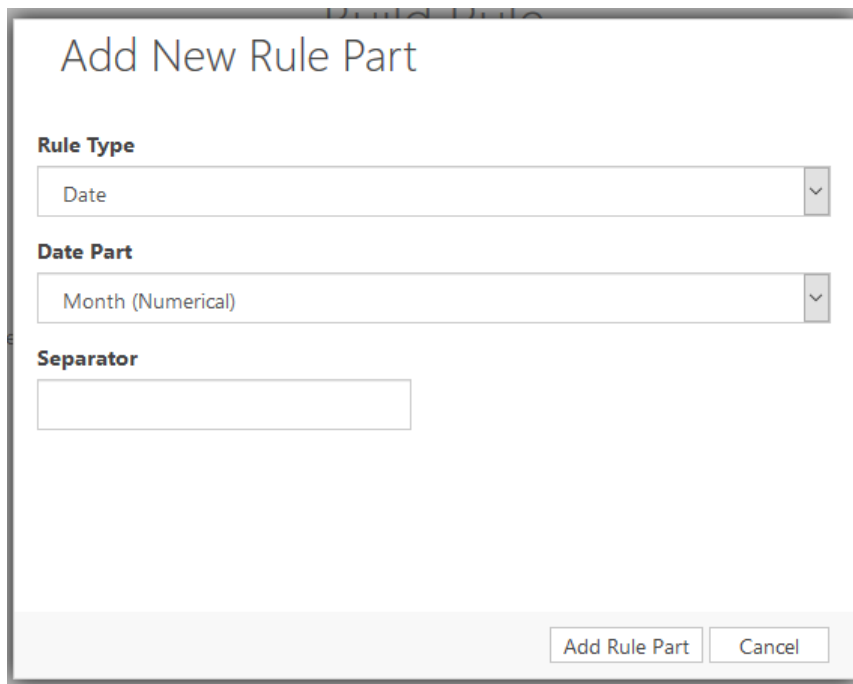**Always Update**

☐ Always apply rule when record is updated

Next Autonumber

300

Date

The **Date** Rule Type inserts the current date in a variety of formats. These are

- Day (Numerical) – This displays the day portion of the date in the two-digit date format, for the first of the month it will show **01**.
- Day (Short Text) – This displays the day portion of the date in the short text format, so for Monday it would display **MON**.
- Month (Numerical) – This display the month portion of the date in the two-digit date format, for March it would display **03**.
- Month (Short Text) – This displays the month portion of the date in the short text format, so for March it would display **MAR**.
- Year – This displays the year portion of the date in the four-digit format, for example **2017**.
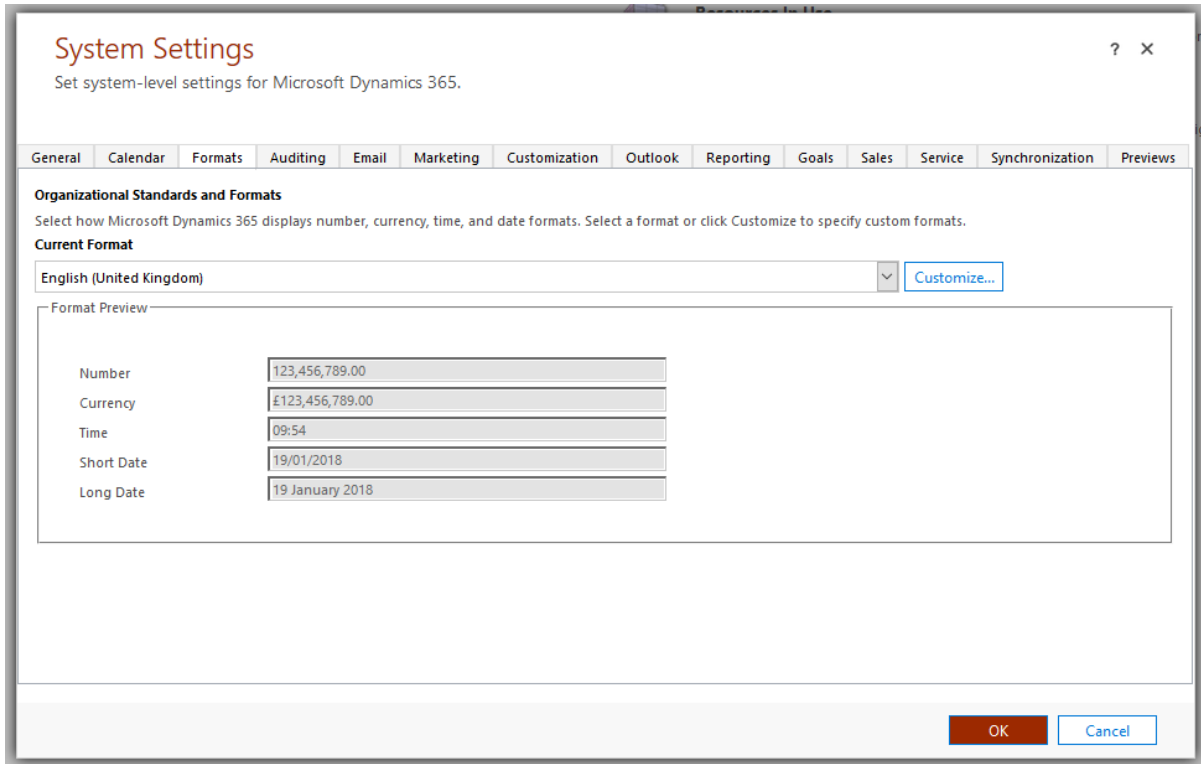

TIP – If you want the full date just build up multiple Date Part Rules.

The date will be formatted according to the Organisations Current Format found in **Settings -> Administration -> System Settings** as the screenshot on the next page shows.

If for example you use the **Swedish (Sweden)** format then the **Day (Short Text)** would return **FRE**.

Please Note: The Sample is generated client side and therefore uses your browsers language to render the sample.

Shows the System Setting Format screen.

Field

The **Field** Rule Type allows you to populate data from the entity the Rule runs against. Depending on the Field type, there are Formatting options available.

Either the data for the field will be from the values available when the record is created/updated or if not available, it will look up the current value. If the record does not contain any data then it can use the optionally entered text in the **Default** field.

Formatting Options

None

Returns the text as entered. If the Field type is not a string, it returns the value as a string representation. For types, such as OptionSets, that have "Labels" then the Label text returns.

OptionSet Example:

Value	Label	Result
0	DHL	DHL
1	Royal Mail	Royal Mail

Upper Case

Returns the text converted to upper case.

Example:

Bang   ->   BANG

Integer Value

Returns the Integer value of type that contain Labels and values, such as OptionSets.

OptionSet Example:

Value	Label	Result
0	DHL	0
1	Royal Mail	1

Initials from Name

Returns the capitalised Initials of a Lookup or Owner field.

Example:

James Dunstin   ->   JD

Jacks Motorcycle Club   ->   JMC

Day (Numerical)

Applicable to Date and Time fields, displays the day portion of the date in the two-digit date format.

Example:

25/12/2018	->	25
01/01/2012	->	01

Day (Short Text)

Applicable to Date and Time fields, displays the day portion of the date in the short text format.

Example:

25/12/2018	->	TUE
01/01/2012	->	SUN

Month (Numerical)

Applicable to Date and Time fields, display the month portion of the date in the two-digit date format.

Example:

25/12/2018	->	12
01/01/2012	->	01

Month (Short Text)

Applicable to Date and Time fields, displays the month portion of the date in the short text format.

Example:

25/12/2018	->	DEC
01/01/2012	-	JAN

Year

Applicable to Date and Time fields, displays the year portion of the date in the four-digit format

Example:

25/12/2018   ->   2018

01/01/2012   ->   2012

Field Type	None	Upper Case	Integer Value	Initials From Name	Date Formats
Single Line of Text	X	X			
Option Set	X	X	X		
Two Options	X	X	X		
Whole Number	X				
Floating Point Number	X				
Decimal Number	X				
Currency	X				
Date and Time	X				X
Lookup	X	X		X	
Customer	X	X		X	
Status	X	X	X		
Status Reason	X	X	X		
Owner	X	X		X	

Please Note; for Field Types that have **Localised Labels** such as Option Set, Two Options, Status and Status Reasons, when returning the string values the value returned will be in the base language of CRM and not the user's language.

Always Update

Tick this box to ensure the rule runs every time the entity record updates. Useful for creating name rules that consist of rule parts that update often. If you have specific conditions and triggers, create a Business Process Entity Name/Number Rule to ensure the rule runs only when required. Examples are available later in the document.

Please Note; if the **Target Attribute**'s **Available for Update** setting is **Create Only** this option will not be available.
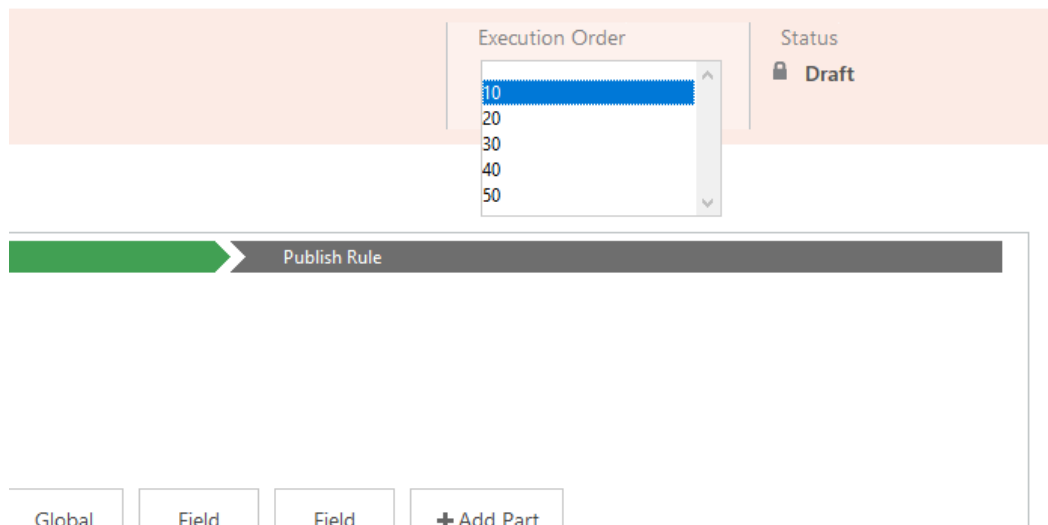
Execution Order

The Execution Order determine which order the rules execute. This is useful when in the situation that you have multiple rules executing against the same entity and it is import that one rule is required to execute before another.

An example of this would be if you wanted to create a unique number for an Account record, but then wanted to use that unique number in another rule to generate an account reference. If you wanted the Account Reference Number to be AC3000/JH/2018 where **AC** represents that the customer is an Account record, the **3000** represents the customers unique number, **JH** represents the initials of the Owner of the record and **2018** represents the year the account was created. Although a perfectly valid Account Reference Number, if the owner of the account record changes and you wanted to update the customer's Account Reference Number to reflect this, you would still want the customer unique number to remain **3000** and only change the initials of the Owner. To do this, you would need to store the customer unique number in one field in your first rule and then in the second rule you would use this value as a **Field Rule Part**. For this to work correctly you would need to ensure that the customer unique number was generated and stored in the field before it was used in the next rule. For us to achieve this we need to use the Execution Order.

By default, the **Execution Order** value is 10.

To change the **Execution Order** the Auto Name/Number Rule needs to be in Draft mode and set the Execution Order to a higher value from the options available.

Please note; Execution Order only applies to **Single Entity Name/Number** rules and will execute in order from lowest first.
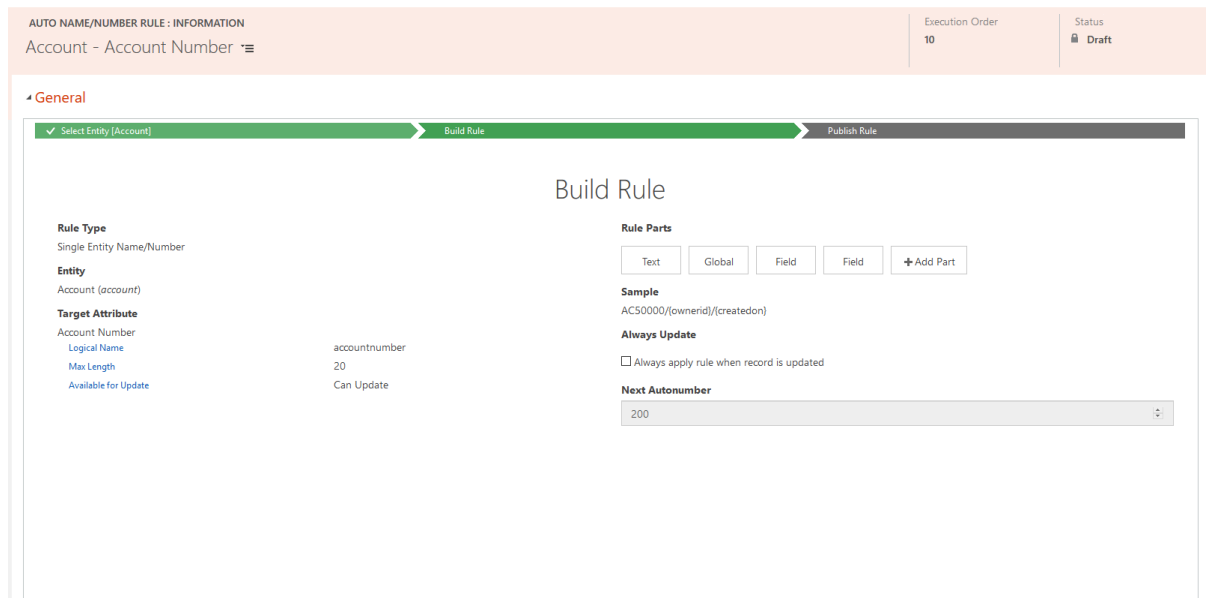
Next Autonumber

The Next Autonumber text box allows you to set what the next number will be for any **Autonumber** Rule Part used in the rule. Until the rule is published, you can change this to any whole number between 0 and 2,147,483,647.

> Please ensure you leave enough numbers for this to increment by. For example, if you set the value to 2,147,483,647 the next number 2,147,483,648 would be outside CRM's Maximum Value and would error when trying to update.

Once the rule has been published, the **Next Autonumber** field is disabled on the form.
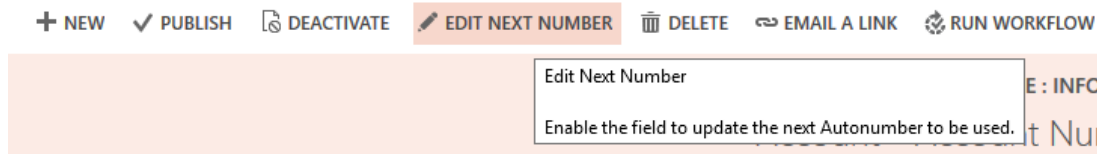
Editing the next Autonumber

In order to edit the **Next Autonumber** you must first **Unpublish** the Rule so its Status is **Draft**.

The image above shows a screenshot of a rule that is in **Draft** but has been previously **Published**. The Next Autonumber field is disabled and you cannot change it.

The Command Bar, shown above, will now have a new button **EDIT NEXT NUMBER** that you can use to enable the Next Autonumber field on the form allowing it to be changed.
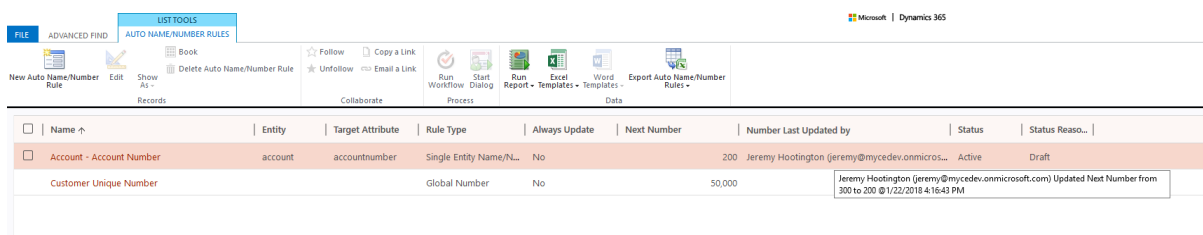
A warning is displayed before enabling the field.

Once the record has been saved the Next Autonumber field will once again be disabled and you will need to repeat the process to make the change again.

Auditing the next Autonumber

Most fields for the Auto Name/Number Rule entity are enabled for auditing, so if auditing is enabled you can see when changes have been made to the rule.

However, because the field **Next Autonumber** will be incremented every time it is used, auditing is not available for this field.

It is useful though to have an audit of when this field is changed manually, for this reason, when the **Next Autonumber** field is changed manually (once the rule has already been published) an audit log will be kept in a field called "Number Last Updated by" on the Auto Name/Number Rule record. You can add this field into Advanced Find to see the contents.
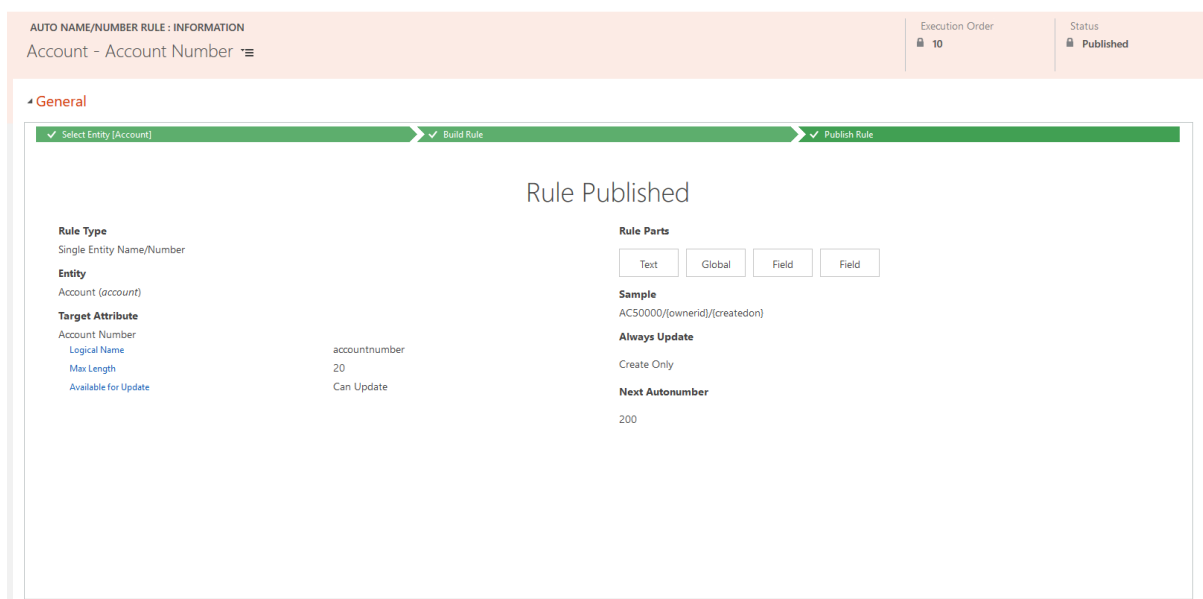
Publishing a Rule

An Auto Name/Number Rule will not run against a record unless first published. Auto Name/Number Rules can only be published from the form. If not already on the form, you will need to open or edit the record to enable the **Publish** command bar button.

> Please note; you will not be able to publish the form if no Rule Parts have yet been added or if the form is **dirty** (needs a pending save to be actioned).

A published rule will look as above

Deleting/Deactivating a Rule

If you are deleting or deactivating a rule, the standard CRM dialog will show and once confirmed the rule will no longer run.

> Please note; you can only delete one rule at a time and this can be done from either selecting the record on in a grid or from the form.
>
> Deactivating a rule can only be done from the records form.

Deleting/Deactivating a Global Number Rule

If you have used a Global Number Rule as a Rule Part in another rule you will not be able to Delete or Deactivate the Global Number Rule.
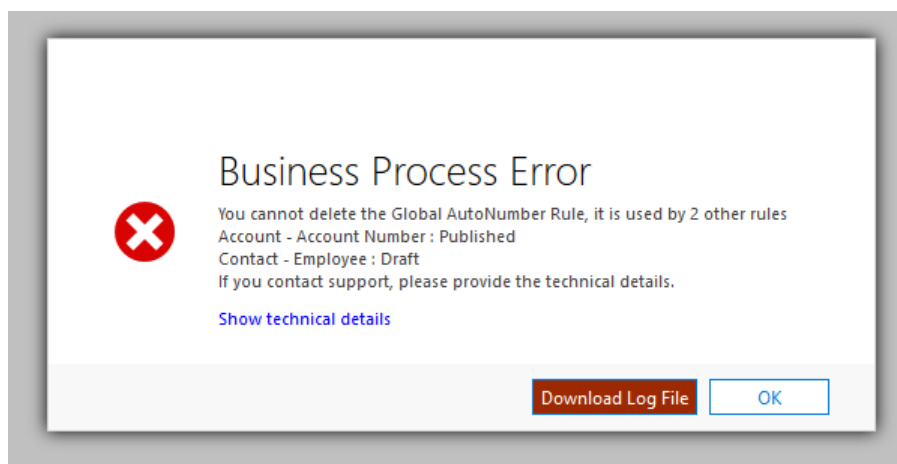
If this is attempted, a **Business Process Error** similar to the above screen is displayed, showing the number of Rules and which rules are using the Global Number Rule.

Examples

For the purposes of this guide it is assumed that all your CRM Entities are as they are in a new instance with the default labels and in English language. For instance, the **account** entity is called **Account** and has not been renamed to **Customer**. If your entities have been renamed, then please adjust your steps accordingly.

Creating an Account Number

In this first example, we are going to use the scenario that we have previously referred to in this user guide.

We are going to create a rule that generates an Account Number that consists of a Global Number, the Owners initials and the year the record was created.

Make sure you are in Settings -> Auto Name/Number Rules

Step 1 – Create a Global Number

- Click on the **New** button and then change the **Rule Type** to **Global Number**
- Enter the Name **Customer Unique Number**
- Set the Next Autonumber to **5000**

Select Rule Type

Global Number

Use this for generating a Unique Number across multiple entity types.

Name

Customer Unique Number

Next Autonumber

5000

- Click on **Save**

Step 2 – Create the Account Number Rule

- Once saved from the previous step click on the **New** button
- Keep the Rule Type as **Single Entity Name/Number**
- Under **Select Entity** select your "Account" entity
- Change the **Target Attribute** to **Account Number**
- Click the **Save** button

Step 3 – Build the Account Number Rule

- Click on the + **Add Part** button.
- Change the **Rule Type** to **Text**
- Enter the text **AC**
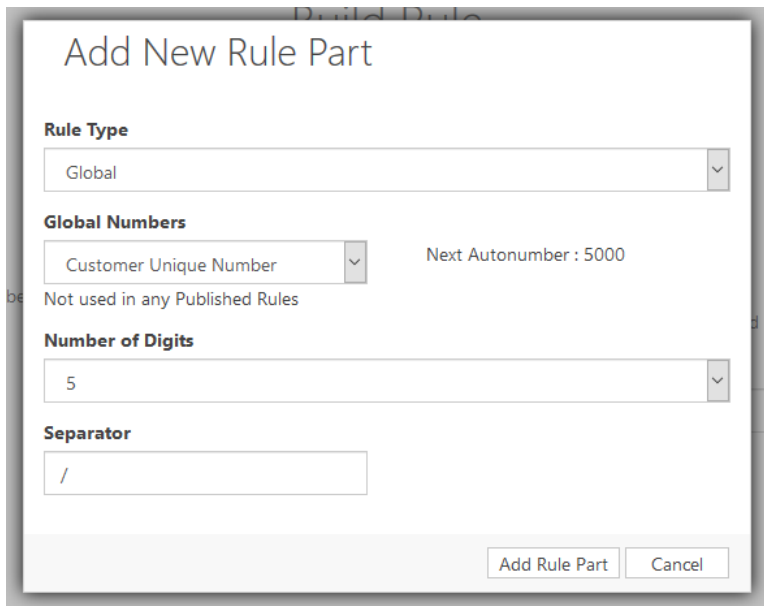
- Click on the **Add Rule Part** button
- Click on the **+ Add Part** button
- Change the **Rule Type** to **Global**
- Make sure **Customer Unique Number** is selected
- Keep the **Number of Digits** at **5**
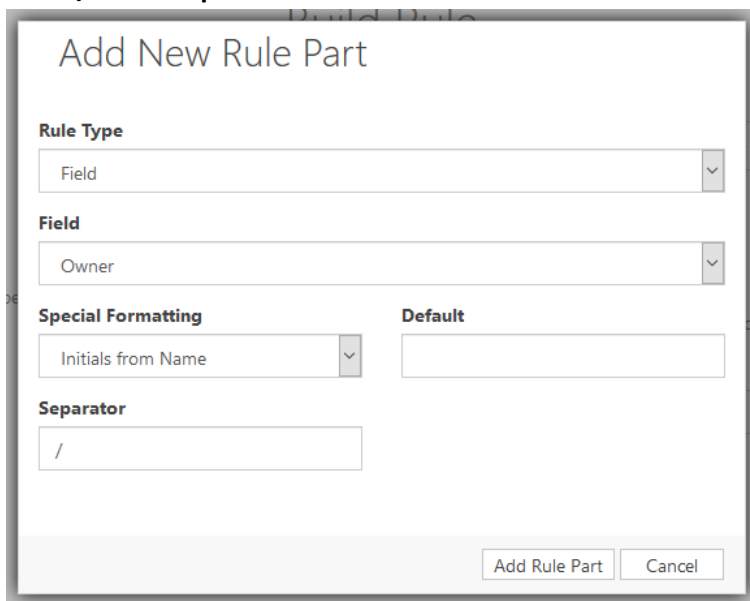- Enter **/** in the **Separator** box

- Click the **Add Rule Part** button to add this Rule Part.
- Click the **+ Add Part** button
- Change the **Rule Type** to **Field**
- Select the **Owner** field
- Change the **Special Formatting** to **Initials from Name**
- Enter **/** in the **Separator** box
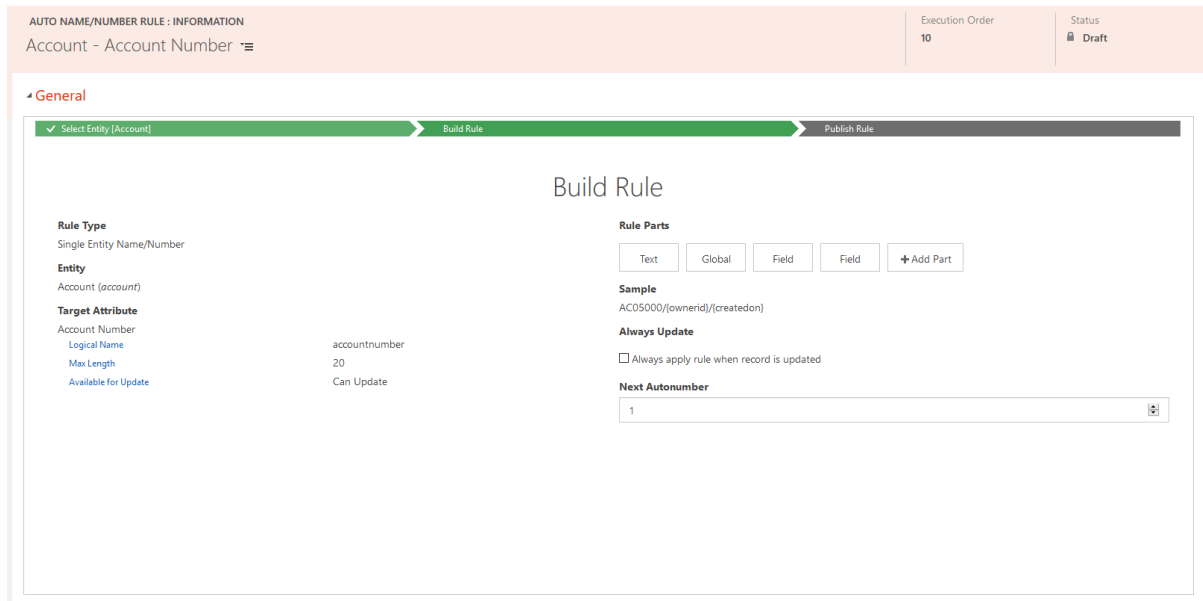

- Click on the **Add Rule Part** button to add this Rule Part.
- Click on **+ Add Part** button
- Change the **Rule Type** to **Field**
- Select the **Created On** field
- Change the **Special Formatting** to **Year**
- Click the **Add Rule Part** button to add this Rule Part.

Step 4 – Publish the Account Number Rule
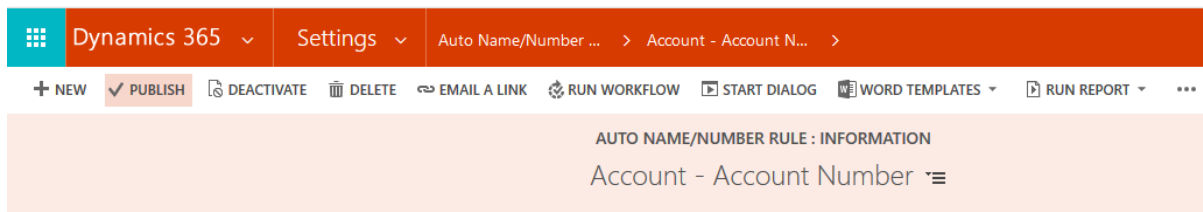
- If you have not already done so, **Save** your changes to your Rule

Your rule should look the same as the image above.

- Click on the **Publish** button from the command bar.

- Go back to **Settings** -> **Auto Name/Number Rules** to see your new rules now they are set up.

Step 5 – Test the new rule

- Create a new Account record and then open.
- The Account Number should now display as expected **AC05000/JH/2018**

If you do not have the **Account Number** field available on your form, you can check the field has been populated by searching for you accounts in **Advanced Find**, adding the **Account Number** field to the Columns.

Adding the Account Number column to Advanced Find
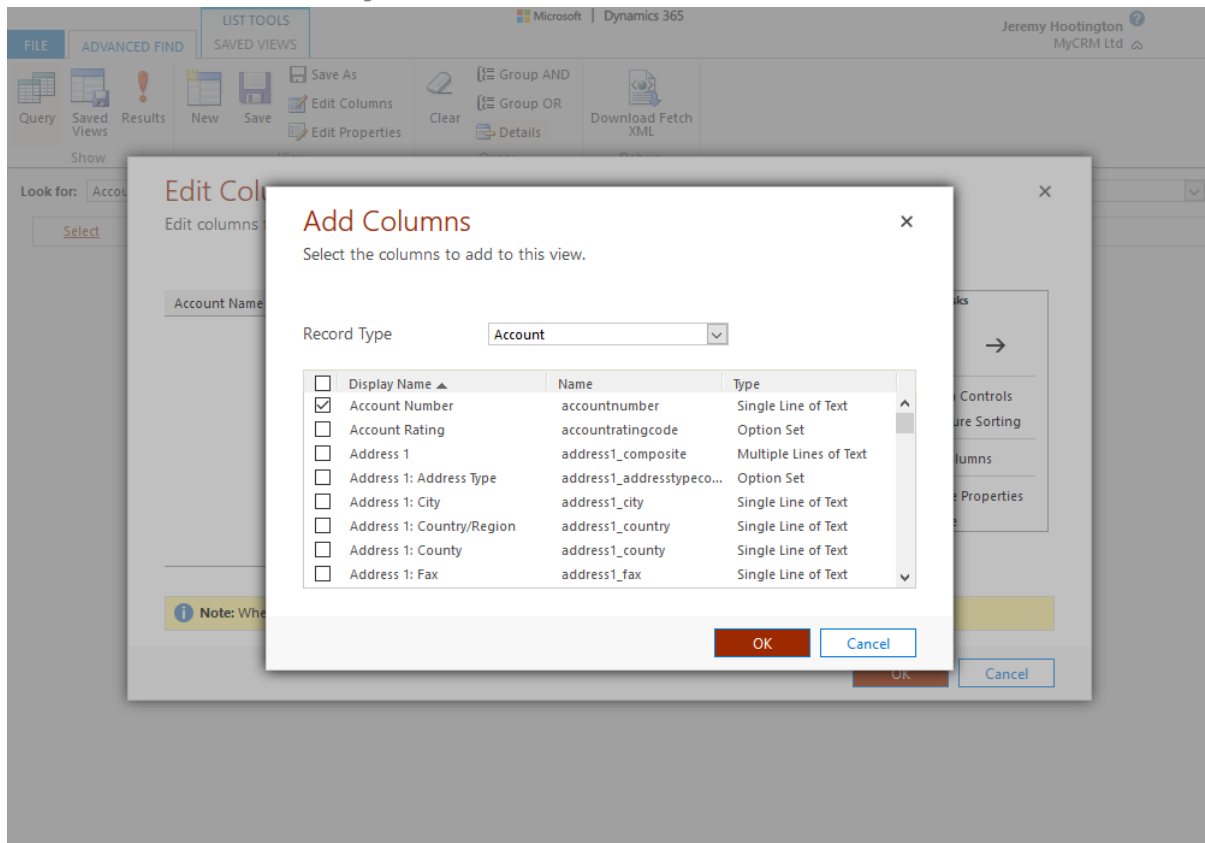
Showing the Result of our new Account

The Next Number has been updated for the Global Number rule.

	Name ↑	Rule Type	Entity	Next Number	Status Reason
	Account - Account Number	Single Entity Name/Number	account	1	Published
	Customer Unique Number	Global Number		5,001	Published

Active Auto Name/Number Rules

Creating a Business Process Rule

In this example, we will be creating a new Business Process Entity Name/Number Rule and using the rule in a workflow.

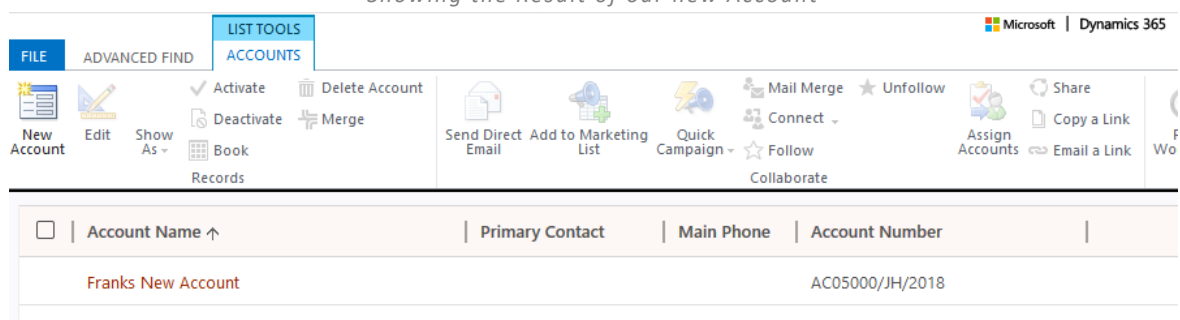The scenario for this example is that we want a meaningful Quote Number generated once the quote is marked as ready. As the Quote ID field on the Quote entity is only valid for **Create Only** you will need to create your field to store the Quote Number in. This document won't go into the detail of making customisation changes to your CRM.

The Quote ID is not valid for a Business Process Entity Name/Number rule.

AUTO NAME/NUMBER RULE : INFORMATION
New Auto Name/Number Rule

Execution Order 10   Status Draft

⊗ The Selected Attribute is not valid to use as the Target Attribute for a Business Process Entity Name/Number rule. If you would like to use this attribute as the Target Attribute then please select 'Single Entity Number/Name' Rule Type

◢ General

Select Rule Type

Business Process Entity Name/Number

Use this for creating a Name/Number rule for a single entity that can be run in a Business Process (Workflow). This allows you to add your own logic.

Select Entity

Quote

Target Attribute

Quote ID

Logical Name	quotenumber
Max Length	100
Available for Update	Create Only

For the purpose of this example, we have also created a new field to trigger our workflow when the Quote is ready for us to generate the Quote Number. This field is **Quote Ready** and is of type **Two Options**.
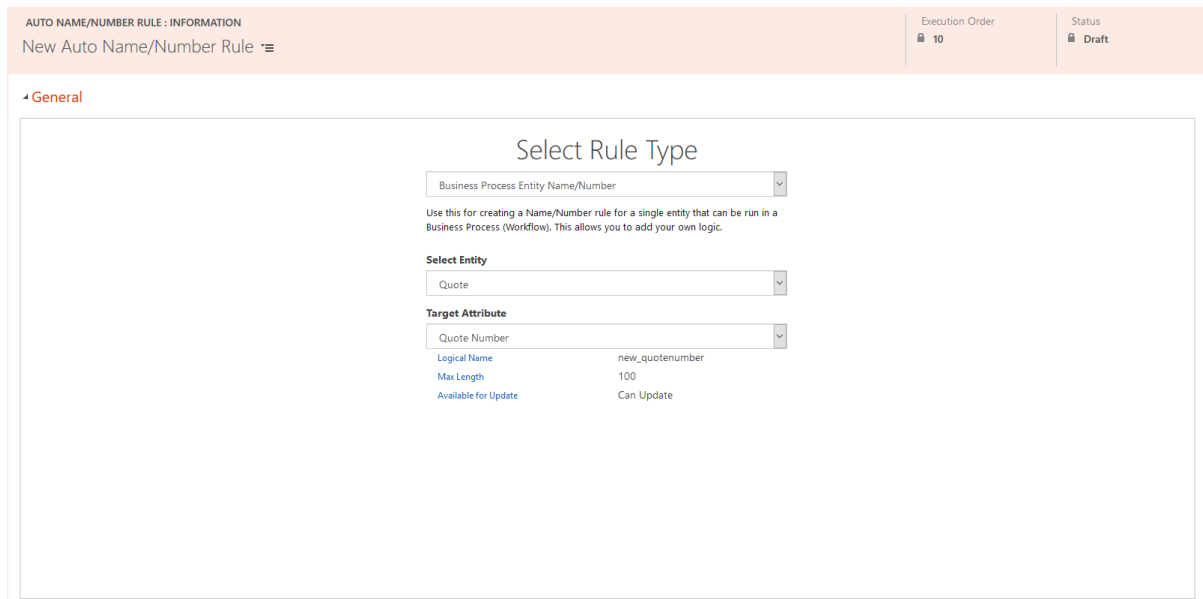
Step 1 – Create the Quote Number Rule

Make sure you are in Settings -> Auto Name/Number Rules

- Click on the **New** button
- Change **Rule Type** to **Business Process Entity Name/Number**
- Select the **Quote** Entity
- Select **Quote Number** as the **Target Attribute**

- Click on the **Save** button

Once saved and in the **Build Rule** mode, build up your rule, in the screenshot below I have created the following rule, starting with the letter **Q** followed by the Autonumber for this rule, which I've set the Next Number to be 1000. Then I've used the Initials of the **Account Manager** field followed by the Initials of the **Potential Customer** and finally a Date Part with the Month as text.
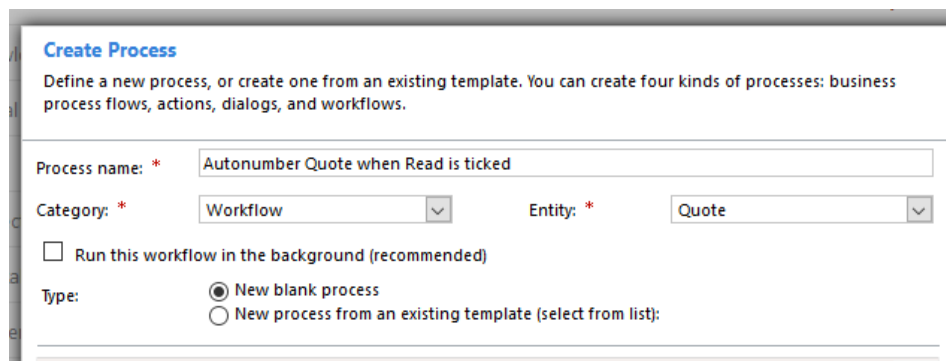

- Once rule changes have been saved, click on **Publish**

Your rule is now ready to use in a workflow.

Step 2 – Create Workflow
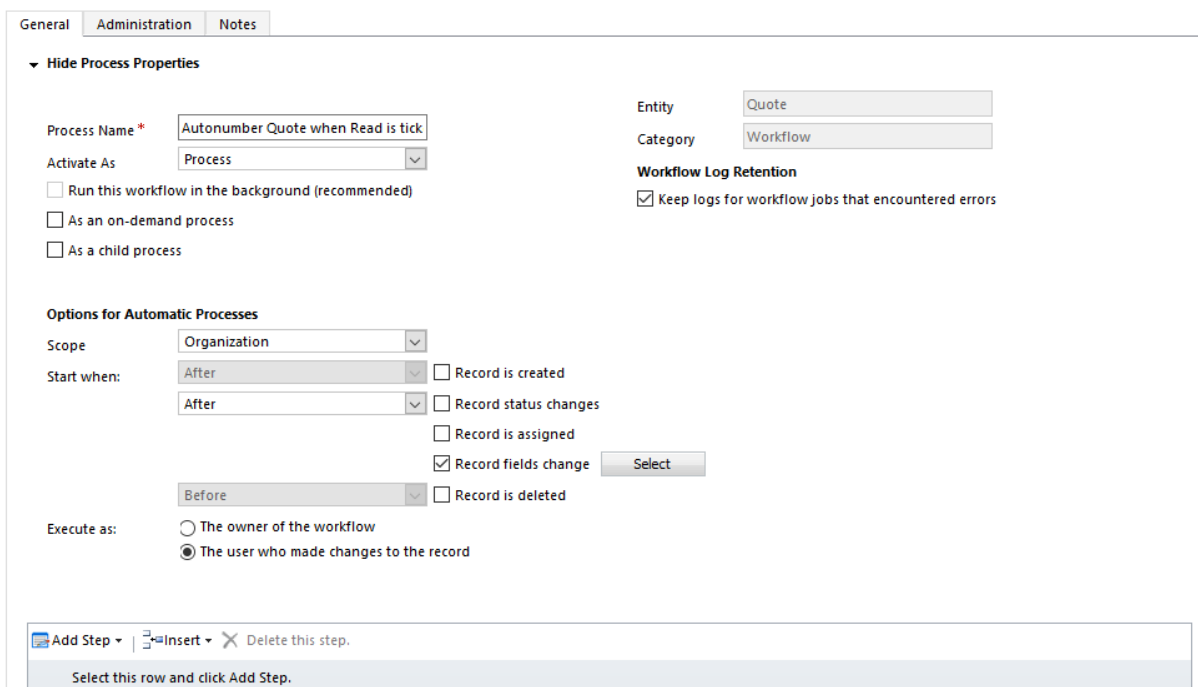
Navigate to Settings -> Processes

- Click on **New**
- Enter a meaningful **Process name**
- Select the **Workflow** Category
- Select the **Quote** Entity.

Create Process

Define a new process, or create one from an existing template. You can create four kinds of processes: business process flows, actions, dialogs, and workflows.

Process name: *   Autonumber Quote when Read is ticked

Category: *   Workflow   Entity: *   Quote

☐ Run this workflow in the background (recommended)

Type: ◉ New blank process
        ○ New process from an existing template (select from list):
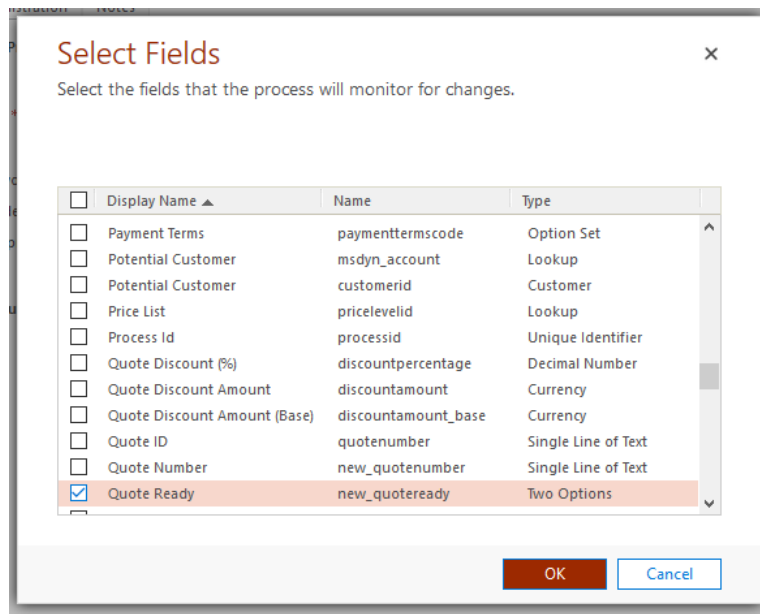
- Click **OK** to create the workflow.

Step 3 – Setup Workflow Options

- Set the **Scope** to **Organization**, this way it will run for every user in your CRM system.
- Uncheck **Record is created**
- Check **Record fields change** this way the workflow will only trigger when the **Quote Ready** field is changed.

General   Administration   Notes

▼ Hide Process Properties

Process Name *   Autonumber Quote when Read is tick   Entity   Quote

Activate As   Process   Category   Workflow

☐ Run this workflow in the background (recommended)   **Workflow Log Retention**

☐ As an on-demand process   ☑ Keep logs for workflow jobs that encountered errors

☐ As a child process

Options for Automatic Processes

Scope   Organization

Start when: After   ☐ Record is created
             After   ☐ Record status changes
                            ☐ Record is assigned
                            ☑ Record fields change   Select
             Before   ☐ Record is deleted

Execute as: ○ The owner of the workflow
             ◉ The user who made changes to the record

Add Step ▾ | Insert ▾ ✕ Delete this step.

Select this row and click Add Step.

- Click the **Select** button to choose which fields to trigger the workflow.
- Find and select the **Quote Ready** field

- Click OK
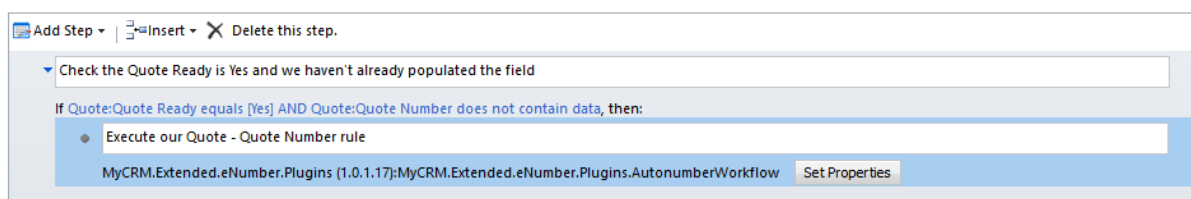
Step 4 – Add Workflow Steps

- Add a **Check Condition** step
- Set the Condition that the **Quote Ready** field equals "Yes" (it's been ticked on the form) and that our **Quote Number** field has not already been populated. This prevents the Autonumber generating a new number each time the field is checked and unchecked.

- Inside the **Check Condition** add a new step choosing the eNumber workflow plugin. Workflow plugins are at the bottom of the **Add Step** dropdown.

- Click on **Set Properties** so we can choose our Autonumber Rule to be executed

Only Business Process Entity Name/Number rules will show in this lookup

Step 5 – Activate and test the Workflow

- **Activate** the workflow
- Create a new quote or edit an existing quote

- Our **Quote Number** field remains blank
- Click on the **Quote Ready** field to change the value to **Yes**
- Save the form which will activate our Workflow

◢ Quote Analysis

🔒 Not Profitable		🔒 Customer Budget Not Available	
Gross Margin (%)	🔒 0.00	Estimated Schedule	🔒 Schedule Not Available
Adjusted Gross Margin (%)	🔒 0.00	Estimated Budget	🔒 Within Customer Budget

◢ Summary

Quote Number	🔒 Q01000/JH/AW/JAN	DESCRIPTION
*Revision ID	🔒 0	----------------------------------
*Name	Example Quote Process	
*Potential Customer	📄 Adventure Works	
*Account Manager	Jeremy Hootington	Bill To Address	11111 William Nicol Drive Johannesburg 2100 South Africa
*Contracting Unit	🔒 t201712282022z59672bb151949515	
Opportunity	----------------------------------	Payment Terms Net 30
*Product Price List	Retail	*Currency Pound Sterling
Requested Delivery Date	----------------------------------	Ship To Address ----------------------------------
Quote Expires On	----------------------------------	
Status Reason	In Progress	
Quote Ready	Yes	

Our **Quote Number** has now been populated by our rule, examine the image below which shows how the Quote Number was generated from our rule.

Rule Published

Rule Parts

Text	Autonumber	Field	Field	Date

Sample

Q01001/{msdyn_accountmanagerid}/{customerid}/JAN

Quote Number	🔒 Q01000/JH/AW/JAN
*Revision ID	🔒 0
*Name	Example Quote Process
*Potential Customer	📄 Adventure Works
*Account Manager	Jeremy Hootington