

Release Notes for Data Quality Studio 10.0.37.8

Release Notes

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1. Introduction

1.1 Purpose

This document highlights new features, bug fixes and improvements in this release of Data Quality Studio (DQS) 10.0.37.8 from To-Increase B.V. This release is compatible with the version of Microsoft Dynamics 365 for Finance and Operations, 10.0.34 and higher.

1.2 Audience

This document is intended for new users of Data Quality Studio partners and customers. Some knowledge of Dynamics 365 for Finance and Operations is assumed.

1.3 Deliverables

Deliverable	Description
Solution package	Data Quality Studio is delivered as a Microsoft Dynamics Lifecycle Services (LCS) solution package.
Software deployable package	Data Quality Studio 10.0.37.8
Release notes	This document is provided with the Data Quality Studio product deliverables.
Implementation methodology	The solution package contains a <i>Data Quality Studio implementation methodology</i> that provides detailed step-by-step instructions on how to install, learn, and implement Data Quality Studio.
Getting started BPM library	The solution package includes a <i>Getting started with the Data Quality Studio</i> BPM library. This library contains several task guides that showcase some of the key capabilities of Data Quality Studio.
Documentation BPM library	The solution package includes a <i>Data Quality Studio documentation</i> BPM library. This library contains a comprehensive set of task guides that document how to use <i>Data Quality Studio</i> for your BPM activities. This documentation is provided in U.S. English only.
Authentication assets	A To-Increase security certificate is provided to allow trusted installation of the provided solution and ISV license files.

1.4 Product Release information

Data quality studio 10.0.37.8 for Dynamics 365 Finance and Dynamics 365 Supply Chain Management (10.0) is built upon D365 version 10.0.34. Since Microsoft maintains a no breaking changes policy, the fact that this release is built on this version means that it can be applied to an environment running on D365

version 10.0.34 or any later version and the application should compile without any issues. However, as we have only functionally validated this version against D365 version 10.0.38, we recommend applying our TI product release on that MS version as well. If you deviate from this (and thus apply the release to a different version), we recommend performing a more thorough round of testing before applying the release to a production environment.

This is summarized in the following table.



Release date [TI-Product]	[TI-Version number]	Minimum required D365 version	Validated against D365 version	Compatible with D365 version
17/07/2023	10.0.34.6	10.0.32	10.0.34	10.0.32 and above
09/10/2023	10.0.36.7	10.0.33	10.0.36	10.0.33 and above
16/01/2024	10.0.37.8	10.0.34	10.0.37	10.0.34 and above

In case of an Error, To-Increase may provide a Hotfix on a reasonable efforts basis in a way it considers appropriate in its discretion. To-Increase cannot be obliged to provide Hotfixes if Client has not deployed the latest Release or the Release second to the latest Release and/or is not using a supported version of Microsoft Dynamics.

To ensure our customers can fully leverage the latest enhancements, features, and quality improvements, we are committed to providing increased support by keeping them updated with the most recent releases. Our data indicates that customers on the latest version experience fewer issues and requests, demonstrate greater resilience, and effectively enhance their organizational efficiency.

More information about our latest available product versions, the latest validate GA-versions from Microsoft as well as the Minimum MS version required, please visit this page: [Knowledge Base - Support - To-Increase](#)

1.5 SHA256 algorithm for licenses

You may have already been informed by Microsoft, that licenses that are generated using the SHA1 algorithm will no longer be supported starting at Microsoft Dynamics 365's F&SCM version 10.0.39. This update will be generally made available by Microsoft on March 15th 2024.

As we currently use the SHA1 algorithm for our licenses, there is an action for you to take to ensure you can continue using our services. We introduce the new SHA256 algorithm for our licenses, which will be supported going forward by Microsoft.

What do you need to do before updating to version 10.0.39?

1. Please go to the Solution Management Workspace in your F&SCM environment
2. Retrieve and install these licenses based on the SHA256 algorithm. You can find a guide on how to do that under this link

After retrieving and installing the new license, you can upgrade to version 10.0.39 without any interruptions to our services.

There should be no effect on any of your performance. In case you experience any effect, please reach out to us under customeroperations@to-increase.com.

2. What's New

2.1 Current release

2.1.1 Data enrichment on related tables

Previously, With the Action rules, user can set field values in a current record only. This enhancement will allow the user to insert new or update existing records in a target data source that are related to the current record. This enhancement will allow the user to specify the target table and specify the relationship between the current record and record that need data enrichment.

The screenshot shows the configuration for a data enrichment rule. The 'Enrichment rules' tab is selected. A table lists the source data source 'VendGroup' with event 'Source field modified' and source field 'Description'. The 'Enrichment lines' table shows a new entry for 'PaymTerm' with target field 'Terms of payment' and value type 'Source field'. The 'DETAILS' section on the right shows fields for 'PaymTerm'.

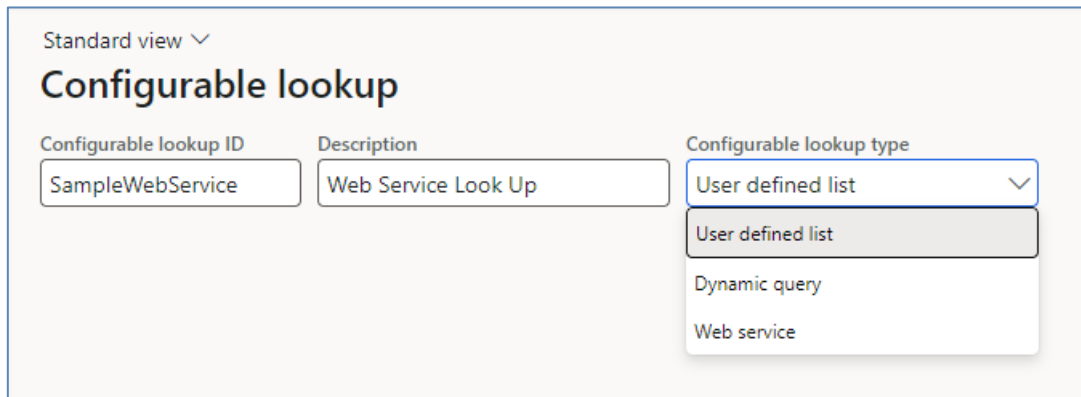
In the screenshot specified above, we need to click on the highlighted button titled *Target datasource* and need to specify the target data source. In the screenshot below, we have specified a target data source, i.e. PaymTerm, for which the source data source is VendGroup.

The screenshot shows the configuration for the target data source. The 'PaymTerm' table is selected. The 'Relation name' field is empty, 'Table name' is 'PaymTerm', and 'Source datasource' is 'VendGroup'. The 'General' section shows 'Update source record' set to 'No' and a 'Query' field.

In the first screenshot, we have specified that a new value must be added in the *Term of payment* column of the PaymTerm table, based on the value specified in the Description field of the source data source, VendGroup.

2.1.2 Web services support for configurable lookups

This enhancement will allow the user to setup a configurable lookup using web services in the application. On the *Configuration lookup* page of the DQS application, the application will prompt a new configuration lookup type named: Web Service.

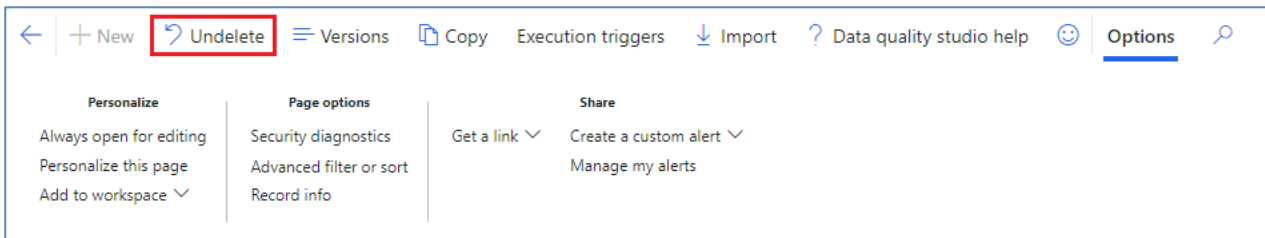


For the web service lookup, user will need to specify the following details:

- Web Service
- Web service lookup value field
- Web service lookup description field
- Minimum input length

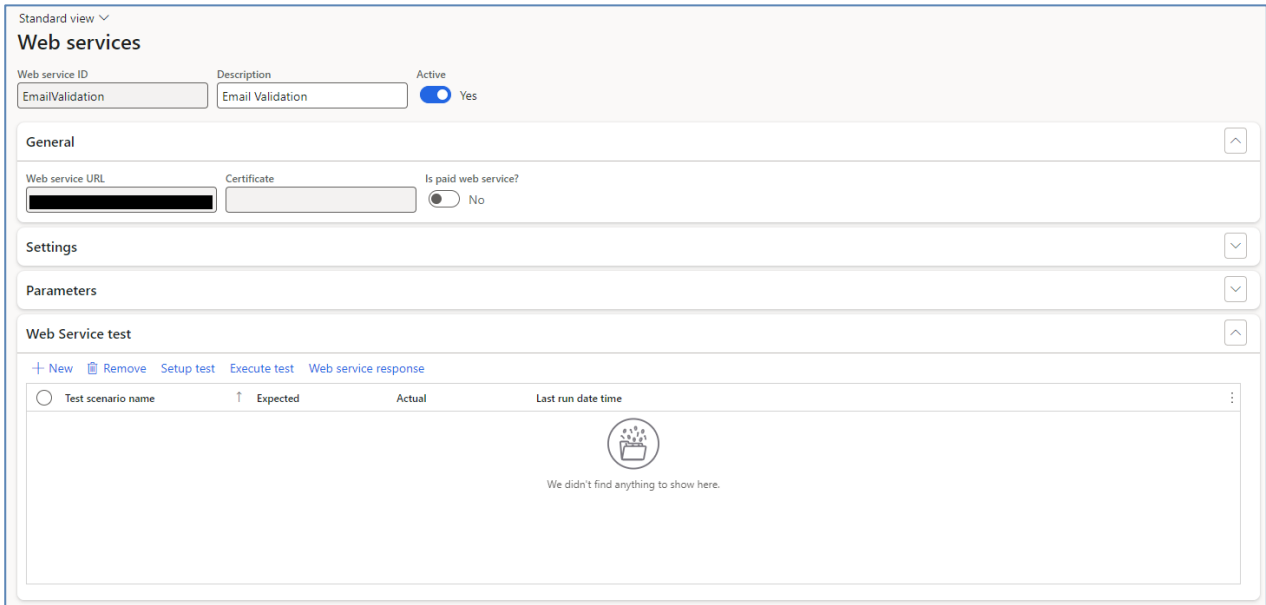
2.1.3 Restore retired data policy

This enhancement will allow the user to un-delete a retired data policy. A new button has been added to the Retired Data Policy page titled as *Undelete*.



2.1.4 Test feature for Web Service

This enhancement will allow the user to test a web service. A new fast-tab has been added on the *Web Service* page which will allow the user to test the web service. This functionality will be available for data quality administrator role. The feature will allow the user to test the connection to the webservice and test the request and response for the web service.



2.2 Release 10.0.36.7

2.2.1 Quality assessment – user security

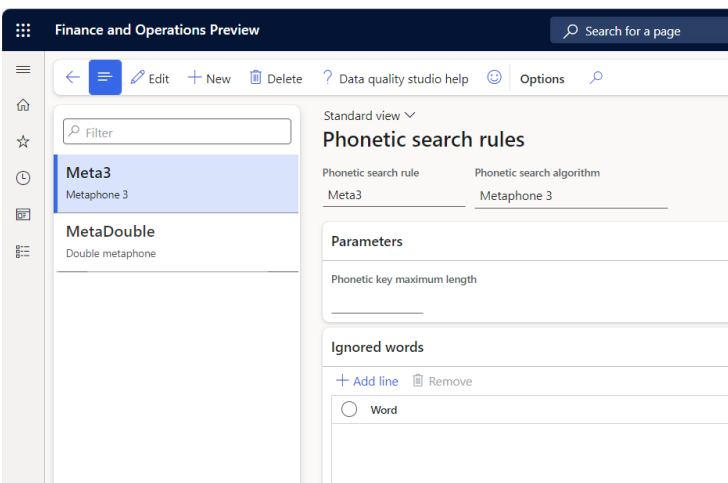
In this current release, we enhanced the quality assessment feature, introducing security on what users would be able to see what data in the results overview. Using the security role Data quality officer, a person would be able to see the quality assessment results for only the projects they are setup as a data owner. You can setup an overall data owner for a project, but also specific persons responsible for each legal entity individually.

2.2.2 Phonetic searches in duplicate checks

Previously, we released duplicate checks based on fuzzy logic. In this release, we also added phonetic search algorithms supporting duplicate checks on names that sounds similar. E.g. Jon and John sound the same and would be used in the fuzzy logic if setup in your environment.

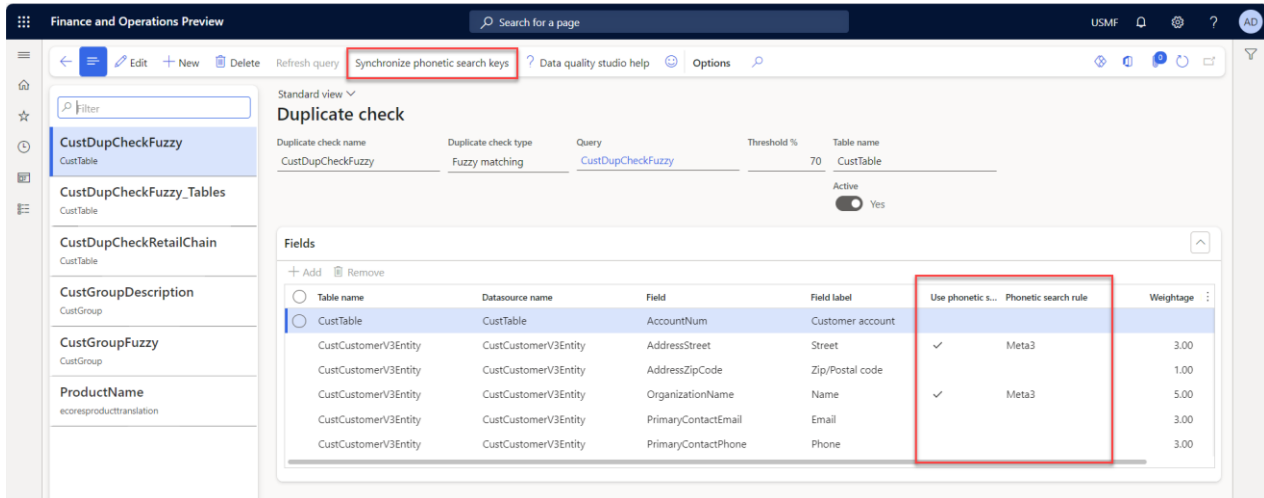
In the setup section, you can setup **Phonetic search rules**. The algorithm supported is Metaphone with two different versions. You can find more information on the internet:

<https://en.wikipedia.org/wiki/Metaphone>



For advanced settings, you can also setup a maximum length or ignore some words to be indexed. We suggest you start with the algorithm setting only and only finetune based on experiences.

When setting up the **Duplicate checks**, you can enable the phonetic search for each field individually, like shown on the screenshot.



When you enabled the phonetic search option for one or more fields, ensure that you will **Synchronize phonetic search keys** which will index existing data for the columns. It is required to schedule a recurring batch to keep the phonetic search keys up to date based on new data entry. You can create one single batch for all duplicate checks by leaving the **Duplicate check name** parameter empty. You can schedule the batch job to run several times an hour. When not enabling the option **Force to recreate**, the job is executing quickly.

2.3 Release 10.0.34.6

2.3.1 Fuzzy logic duplicate checks

One of the main features added in this release is the option to setup and use duplicate checks with fuzzy logic. With help of this feature, a duplicate check can be set up where values from multiple fields will be compared and a duplicate score will be calculated. The check can be performed manually on a form or during the quality assessment.

The setup will start with a dynamic query where information can be sourced from any table and field. There is a need to start with the main table that would be identified as a duplicate. In the example of customer, vendor and released products, the details to check for duplicates are stored in several tables. In these cases, it would be recommended to use available data entities as related table to have all data flattened and easy to understand column names. In case you would need to check both the email and phone number, this would be two records in the contact details table whereas the data entity has them available already as individual fields.

The screenshot shows the 'CustDupCheckFuzzy' query configuration in Dynamics 365. The interface includes a 'Tables' pane on the left showing a table structure with 'CustTable' as the parent and 'CustCustomerV3Entity' as a child. Below this is a 'Fields' pane showing the mapping of fields from 'CustCustomerV3Entity' to 'CustTable', including AccountNum, OrganizationName, AddressStreet, AddressZipCode, PrimaryContactPhone, and PrimaryContactEmail. The 'Details' pane on the right shows a preview of the query results, which is a table with columns: AccountNum, OrganizationName, AddressStreet, AddressZipCode, PrimaryContactPhone, and PrimaryContactEmail. The data rows include various organizations like 'Contoso Retail San Diego', 'Forest Wholesales', 'Cave Wholesales', etc.

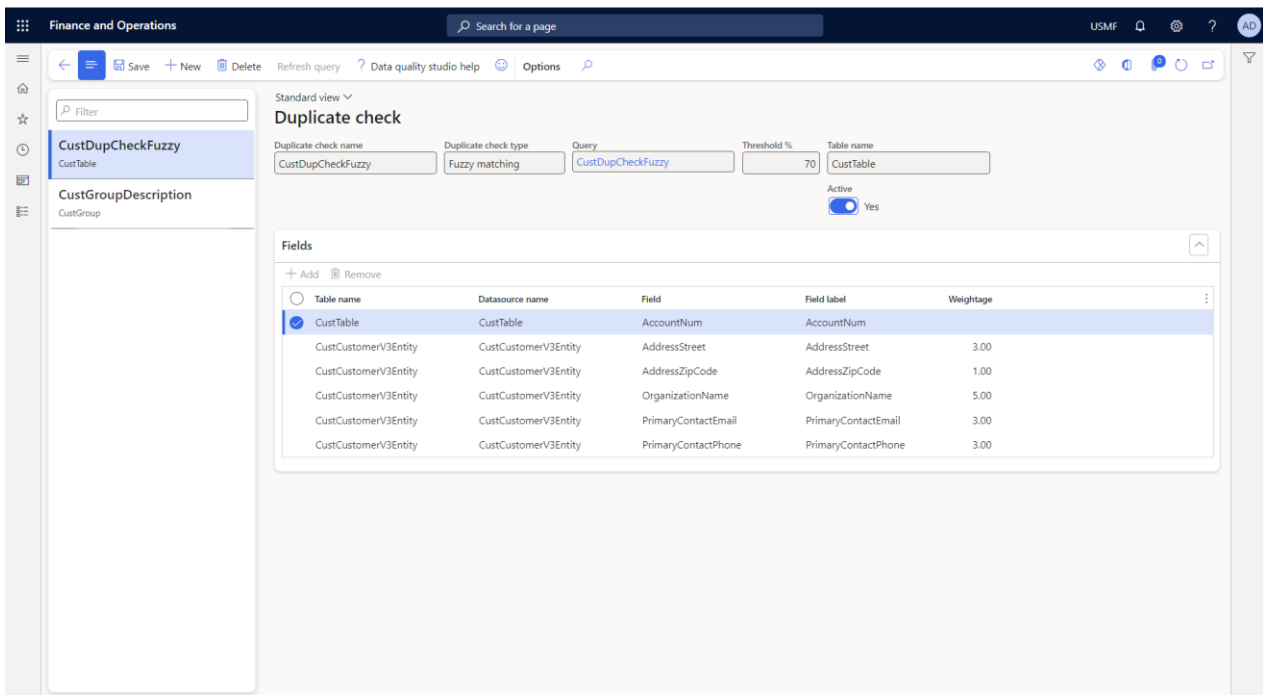
AccountNum	OrganizationName	AddressStreet	AddressZipCode	PrimaryContactPhone	PrimaryContactEmail
US-001	Contoso Retail San Diego	456 Peach Road	92114	321-555-0160	Contoso.R
US-002	Contoso Retail Los Angeles	456 Silver Road	91103	123-555-0111	contoso.re
US-003	Forest Wholesales	123 White Road	90004	123-555-0159	
US-004	Cave Wholesales	456 White Road	31001	123-555-0161	
US-005	Contoso Retail Seattle	123 Silver Road	98104	123-555-0172	Contoso.s
US-006	Contoso Retail Portland	123 Gray Road	97217	123-555-0112	contoso.p
US-007	Desert Wholesales	123 Purple Road	89005	123-555-0162	
US-008	Sparrow Retail	199 Purple Road	89001	123-555-0163	
US-009	Owl Wholesales	123 Violet Road	85003	123-555-0164	
US-010	Sunset Wholesales	123 White Road	78001	123-555-0160	
US-011	Contoso Retail Dallas Irving	789 Orange Street	75063	123-555-0117	
US-012	Contoso Retail New York	678 Orange Street	10006	123-555-0116	
US-013	Pelican Wholesales	456 Violet Road	10002	123-555-0165	
US-014	Grebe Wholesales	Black Road 123	93543	123-555-0180	
US-015	Contoso Retail Chicago	Purple Road 234	60004	123-555-0187	
US-016	Whale Wholesales	Gray Road 234	60010	123-555-0167	
US-017	Turtle Wholesales	Violet Road 234	46046	123-555-0168	
US-018	Contoso Retail Detroit	789 Pear Street	48071	123-555-0119	
US-019	Sunflower Wholesales	123 Bradberry Street	30004	123-555-0144	
US-020	Orchid Shopping	123 Granberry Street	30021	123-555-0146	

When the query is defined, you can go to the Duplicate checks form where you now can choose between two types of duplicate checks.

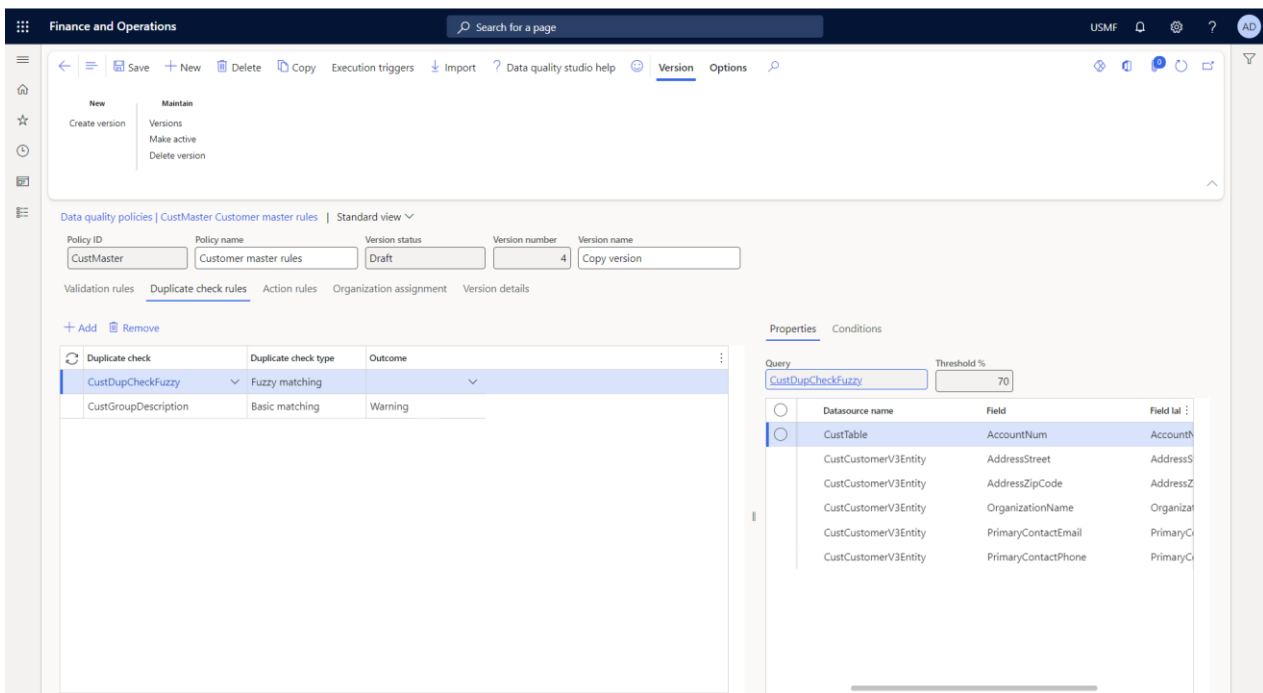
The type 'Basic matching' was the check that was already available in the solution and will try to find the same combination of fields with literal values. E.g. a customer group with the same Description or Product names per language.

The type 'Fuzzy matching' gives you the option to specify the query as created above, together with a threshold and a weightage per field. There is no need to consider a total of 100% for the weightage, you can specify a number with or without decimals. In the example below, the organization name is considered to be 5 times more important than the zip code.

The threshold will be used to determine if a possible duplicate will be reported to the user or not. In case e.g. the zip code would be the only duplicate, then the calculated score will be 6,67%. This record can be skipped to be reported as duplicate.



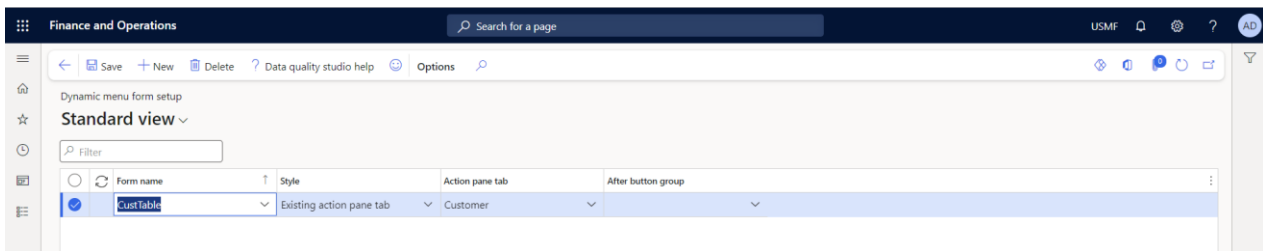
Once the Duplicate check definition is completed, you can set up the data quality policy like the basic matching.



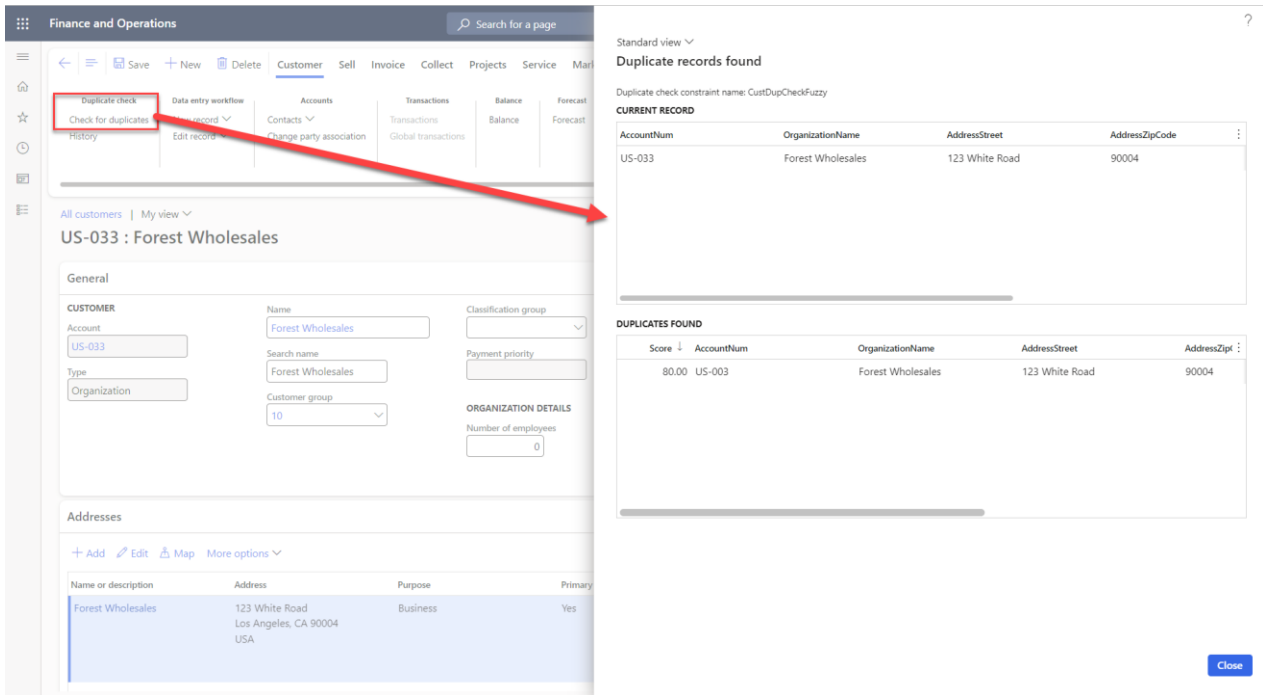
Note that the Outcome is not set as the fuzzy matching is not run automatically when entering data. As data for e.g. a customer or product is stored in multiple tables, the application is not aware when a user completed the data entry.

The duplicate check can be set with conditions to separate between type of records. E.g. you can have another duplicate check for customer master for individual companies and a retail chain. If you have e.g. fast-food chains as customers, the name might get a lower weightage.

On a form Dynamic menu form setup, you can manage on what form, support for calling the duplicate check will be visible and on what position the action should be added.

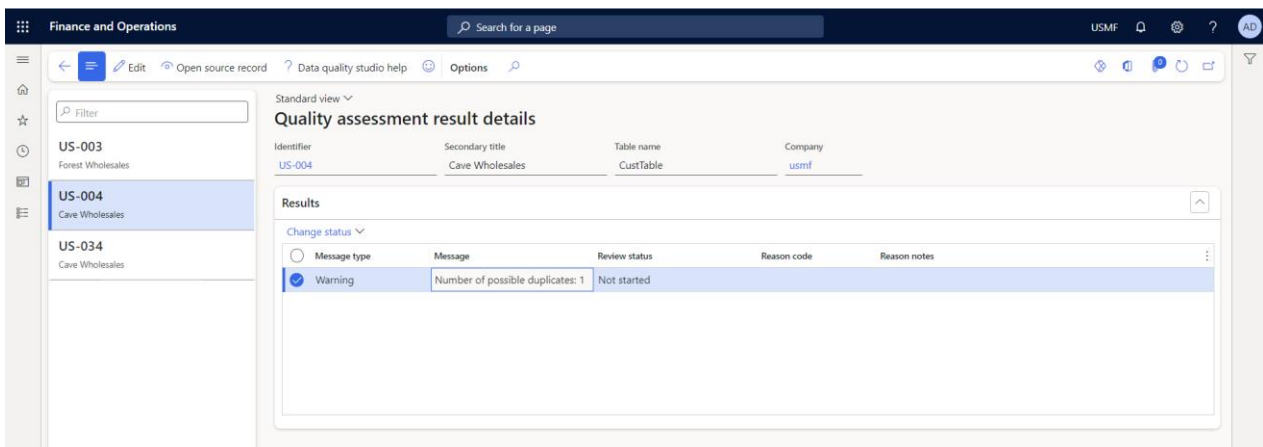


Having the Duplicate check menu items, you can check for possible duplicates.



In this version, there is no automatic deletion or merge functionality. Based on the judgement of the user, a duplicate record should be mitigated manually. This could be e.g. deleting the newly created record manually.

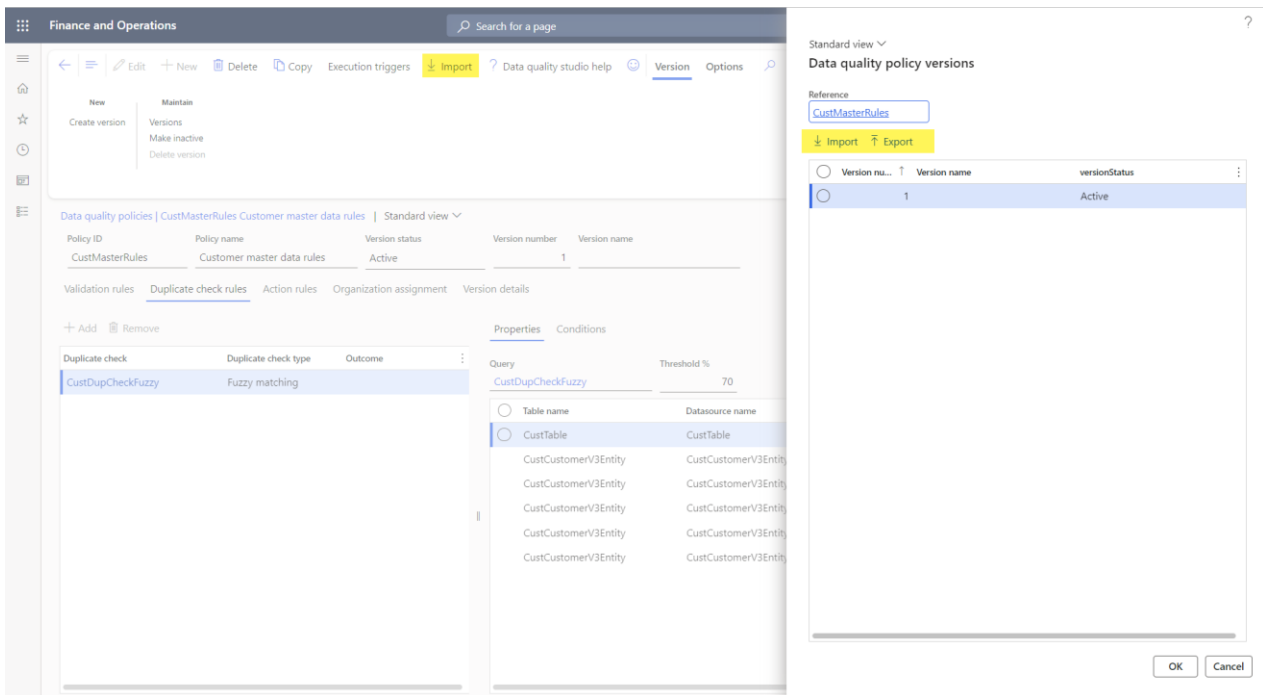
In case a user did not check for duplicates manually, the Quality assessment integration will give warnings about possible duplicates.



When a duplicate check warning is provided, the user can open the source record and check the details of the suggested duplicates.

2.3.2 Data quality policy export and import

A feature was added for exporting and importing data quality policy versions. With help of this feature, you can easily move a version with all rules, settings and conditions from one environment to another.



The export is made available on the Versions page. Import can be done on this same dialog or on the Data Quality Policies page. In case there is no policy with the same name, a policy and first version will be created. In case versions already exists, the import will add a new version.

2.3.3 Visibility enhancement

The active version is now added as column on the Data quality policies list page. This provides better insight if policies are active and with what specific version.

2.3.4 Added Online Help shortcut to Data Quality Studio forms

Like for some of our other products, we have now added a quick way to reach our online documentation. On all forms from the data quality studio solution you will now find a button **? Data quality studio help**.

2.4 Release 10.0.31.4

2.4.1 Certificate renewal

The security certificate, that expires every 3 years, ensures that our customers have valid To-Increase software installed and not an unlicensed copy. This digital check is executed during installations and upon installing the license files, ensures that they have legitimate software installed. The previous security certificates for To-Increase solutions would expire on June 9, 2023.

This release (and releases beyond) contains the new certificate and a new feature within the Solution Management Workspace. After installing the update, the security certificate renewal can be completed in 5 simple steps.

Step 1: Set the environment in maintenance mode

Step 2: Install the update and navigate to the Solution Management Workspace

Step 3: Click the 'Retrieve available licenses' in the action pane

Step 4: Validate the licenses for correctness and completeness and click import

Step 5: Disable the maintenance mode for this environment

Click [here](#) for more information on the Solution Management Workspace.

2.4.2 Support for multiple languages

At To-Increase, we are constantly working to upgrade our solutions and encourage customers to participate by sharing feedback. We had earlier launched an in-app feedback option in our D365 solutions, where our customers can share their feedback and requests while using our solutions. We did receive multiple requests for translations in other (European) languages. We picked the most requested languages and added it to our roadmap.

As of the current release, we do support Data Quality Studio in 10 different languages out of the box. The user interface is, as part of the strategy, available in the next languages: English (US), German, French, Spanish, Portuguese, Dutch, Italian, Norwegian, Swedish, Danish.

To-Increase is using the Microsoft Dynamics 365 Translation Service for automated translations of user interface elements. In our solutions we use standard labels and new solution specific labels. The standard labels are already provided with translations done by Microsoft. The solution specific labels are now also available to users in more languages.

As we used automated translations and reused existing labels, it might be the case that some translations are wrongly translated. With a single translation unit, the AI powered translation service is not aware if it should be translated as noun or verb. Some words do have multiple meanings, like “application”. It could be related to recruitment or a software solution. If you come across such issue, please use the in-app feedback or create a support case, so we can improve the translations for future releases.

If you are in the need for other languages or your business requires a different term, you can extend the label files with a small development effort.

If you have customizations on the translations in your current environment, check if this is done in a separate extension model and correct extension naming convention. If e.g. the name of the To-Increase label file in the English language is *TILabel.en-US.label.txt*, the new translation in German provided by To-Increase will get the file name *TILabel.de.label.txt*. Ensure in your customization will then have a naming convention including the keyword *extension*. A German extension label file has then the name *TILabel_extension.de.label.txt*. The extension labels will have priority above the standard provided labels. You can also choose to remove your labels and uptake our new standard translations.

The next label file(s) are part of this release:

DQS.en-us.label.txt
DQS.da.label.txt
DQS.de.label.txt
DQS.es.label.txt
DQS.fr.label.txt
DQS.it.label.txt
DQS.nb-NO.label.txt
DQS.nl.label.txt
DQS.pt-PT.label.txt
DQS.sv.label.txt

Excluded from our translations:

- To-Increase will continue to offer its services to customers and partners in English.
- Our website, product documentation, release notes, and any other updates will be available in English only.

2.5 Release 10.0.31.4

2.5.1 Configurable lookups

For several use cases, we added a new feature where you can configure custom lookups for supporting the user choosing allowed values. This can be added to field without and with a standard lookup. As an example, you can provide limitations for the credit rating field, but you can also limit the number of options in case of existing reference tables. Suppose you need to constrain the options for method of payments to be used for customers and vendors.

The configurable lookups consist of a generic setting which can be reused on multiple data quality validation rules. You can setup two different lookup types. One type supports a custom pre-defined list where a second option is to source available options from the database with help of the Dynamic Query Framework.

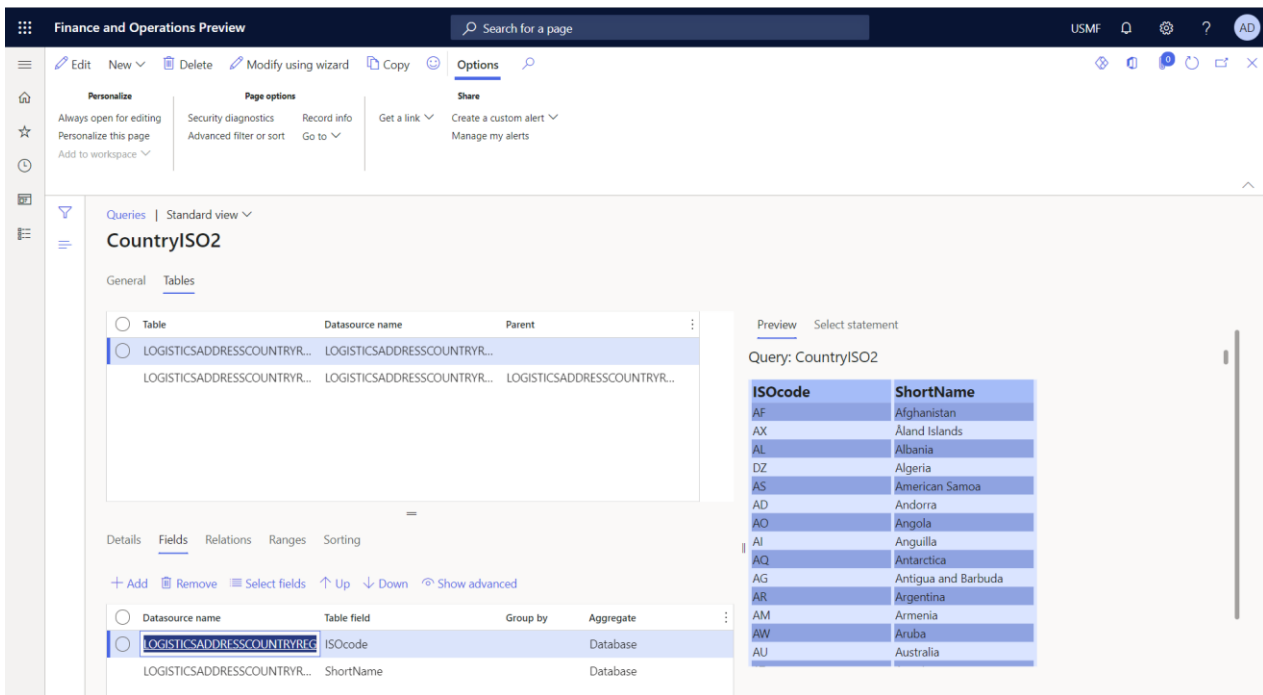
The top screenshot shows the 'Configurable lookup' configuration for the 'CreditRating' field. The 'Configurable lookup type' is set to 'User defined list'. The 'User defined list configurable lookup values' section contains the following table:

Value	Description
<input checked="" type="checkbox"/> Average	On average
<input type="checkbox"/> Bad	Not so good
<input type="checkbox"/> Excellent	Couldn't be better
<input type="checkbox"/> Good	Good rating

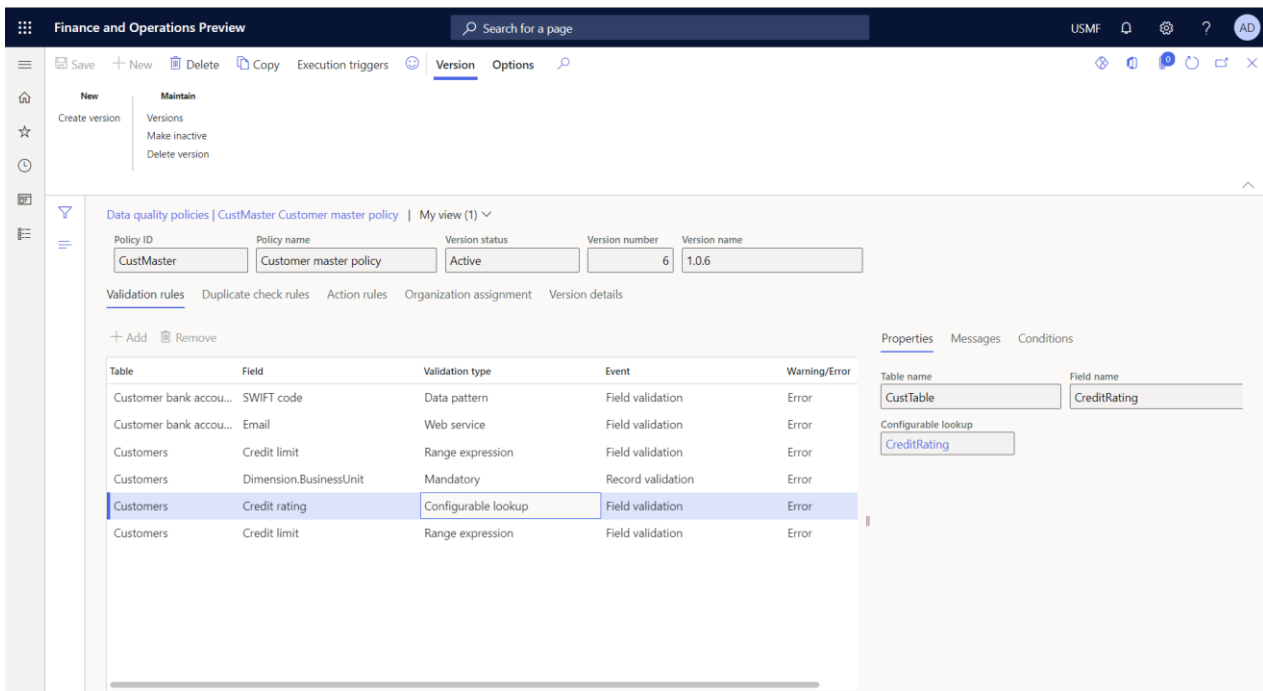
The bottom screenshot shows the 'Configurable lookup' configuration for the 'CountryISO2' field. The 'Configurable lookup type' is set to 'Dynamic query'. The 'Dynamic query configurable lookup values' section contains the following table:

Dynamic query	Dynamic query lookup value field	Dynamic query lookup value descri...
CountryISO2	ISOcode	ShortName

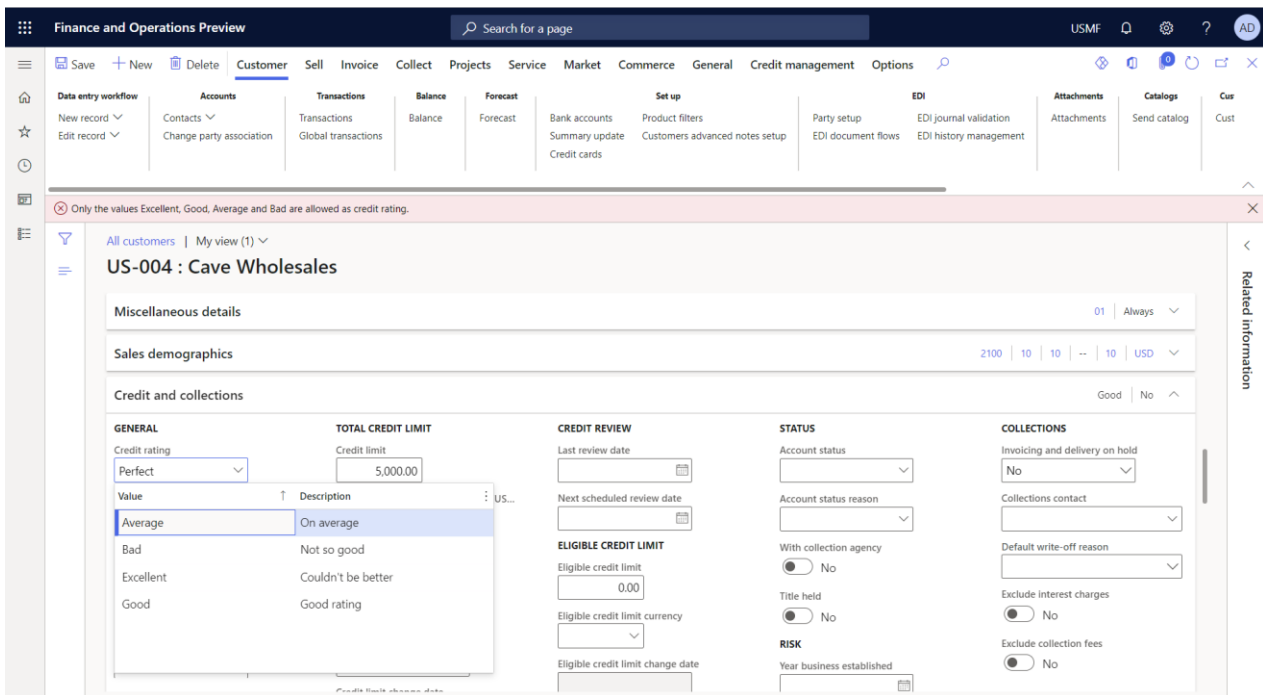
The selected query for this configurable lookup is defined as per next screenshot.



On the validation rules, you can then setup the configurable lookup with a new validation type: *Configurable lookup*.



With the field **Warning/Error**, you can specify if the values from the lookup are mandatory and raise an error or if the user can also provide own values. In that case you can select to give a warning or skip the validation with the value *No validation*. This last-mentioned option can only be used for the configurable lookup validation type. Like any other rule, you can add business messages or conditions if required.



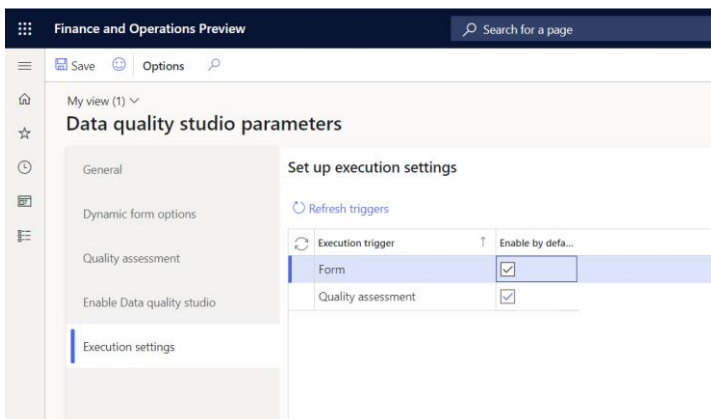
There is a known issue where the lookup values are not being filtered as expected if you start typing a value in the field and then the lookup will appear automatically. A workaround for this is first opening the lookup and then start typing where the list with values will then be filtered. We have a backlog item to solve the current inconvenience.

The configurable lookups is also supported in Data Entry Workflow version 10.0.31.8 or higher.

2.5.2 Execution settings

For supporting flexibility when data quality rules are triggered, there is an option to specify for each policy if the rules will be triggered on forms, for quality assessment or other (future) purposes.

When you have installed the latest version, ensure you will first navigate to the Data quality studio parameters and click on **Refresh triggers** on the Execute settings tab page. The values in the field **Enable by default** will be used when creating new data quality policies.

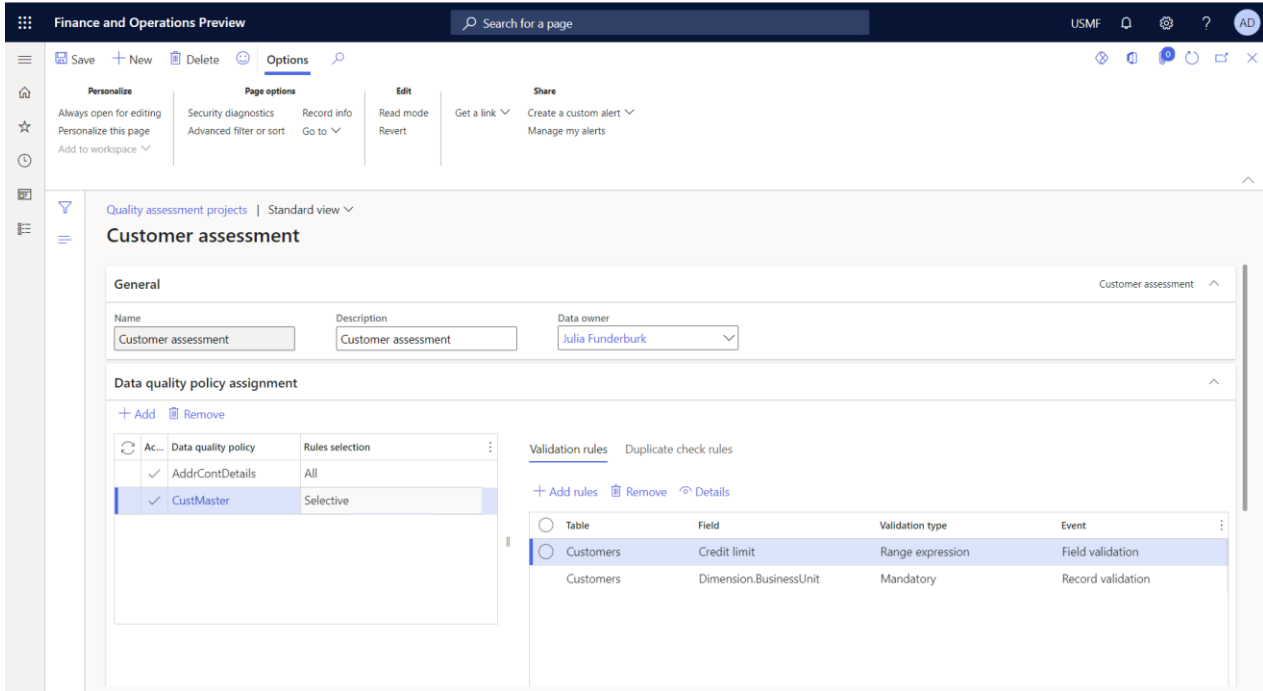


Per policy, you can set when to execute the rules. This would give your organization the option to decide to pro-actively check for valid data or use a process to clean up data periodically. You can access the settings for execution triggers on the action menu bar of the **Data quality policies** page.

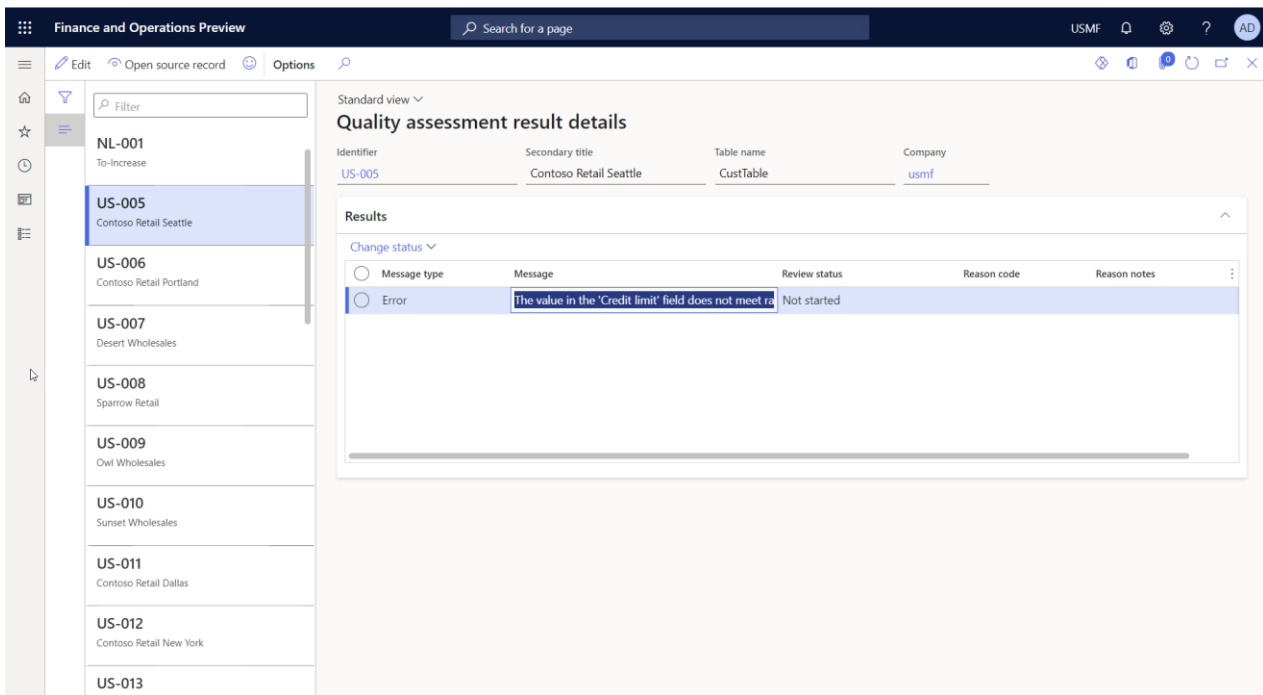
2.5.3 Quality assessment (preview)

A first version of quality assessment is added to this release. With the quality assessment, you can execute validation rules for existing records. It would give you the flexibility to check for valid data at any point of time. You can run the quality assessment when there was a change implemented for data quality studio, when you imported data, when the form triggers are not enabled or periodically to check for the level of quality data.

From the Data Quality Studio, you can open the Quality assessment projects page where you can provide information about the data owner(s) and which rules are to be executed. For different master data entities, you can create multiple projects.



From Data Quality Studio > Periodic tasks, you can start the batch job to collect data for the assessment results.



You can review the outcome and correct the data by opening the form for the source record. With help of the review status you can track the progress and indicate to skip correction this occurrence.

We have some known issues and we are working on some additional features to complete the quality assessment functionality.

- Selection of individual rules are currently not working. It will only run across all rules for a given policy.
- Data restriction. To prevent visibility into private or sensitive data, security will be implemented where e.g. data owners for products will not see details for customer results.
- When opening source records, the application tries to find the default menu item for the given table. Some tables, like addresses and contact details don't have a specific menu item and form. We will work on some specific handling to open e.g. the global address book or customer page.

2.5.4 Tutorial class for action rule

Previously, two tutorial classes were provided with the solution providing examples for custom validations with help of x++ coding. In this release a custom class is added which can take a number from a number sequence and add a checksum digit. The class can be adjusted to the needs of your organization.

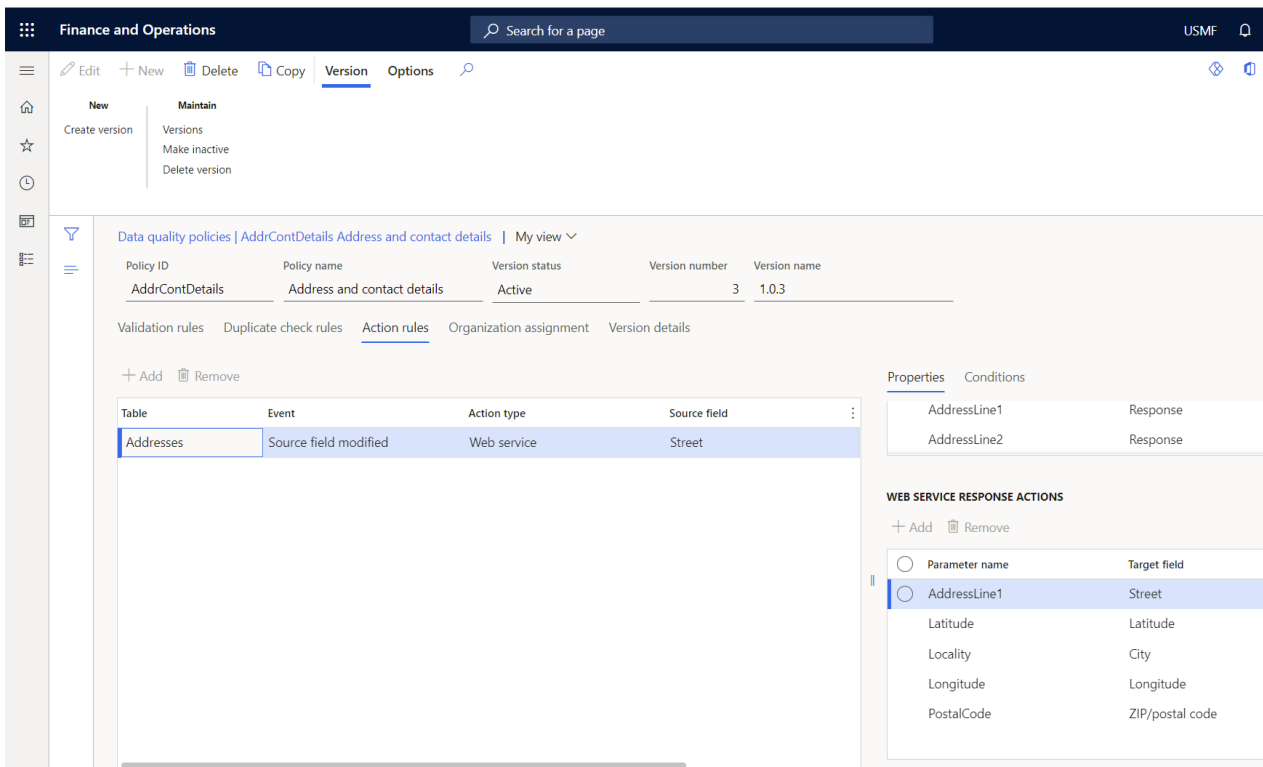
Tutorials are intended as code examples and are not actively supported by To-Increase.

2.6 10.28.3

2.6.1 Web service improvement for action rules

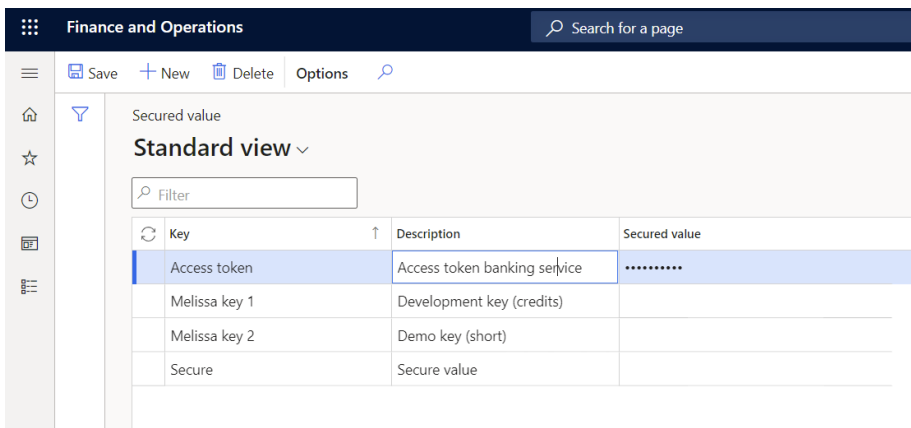
We added the option to setup multiple return values for a single web service call. When using address validation services, the service can return corrected data in individual columns. E.g. when sending an address, depending on the external service, it can correct the street name, complete the postal code for that address and return the longitude and latitude. One return value can be re-used for multiple database fields.

You can link the response fields with the database target fields in the **Web service response actions** part.



2.6.2 Secured values

We have enhanced the web service functionality where it is now possible to store license key or other sensitive data in a form **Secured values**. The secured value can be used as fixed parameter value for web services.



The values can be linked to web services on the parameters tab page.

The screenshot shows the Dynamics 365 Finance and Operations interface. The top navigation bar includes 'Finance and Operations' and a search bar. Below the navigation bar, there are tabs for 'Edit', '+ New', 'Delete', and 'Options'. The left-hand pane shows a list of services: 'Address validation' (Melissa.com address validation, Yes), 'Email validation' (Melissa.com email validation, Yes), and 'VAT number' (EU VAT number validation, Yes). The main area is titled 'Web services' and shows the configuration for the 'Address validation' service. It includes a table of parameters and a settings section.

Web service ID	Description	Active
Address validation	Melissa.com address validation	<input checked="" type="checkbox"/> Yes

REQUEST	RESPONSE	SOAP
Request method GET	Accept application/xml	Use SOAP envelope <input type="checkbox"/> No
Content type application/json	Accept encoding	Message pattern
Custom request handler	Custom response handler	

Parameter name	Direction	Parameter value	Secure key
<input type="radio"/> id	Request		<input checked="" type="checkbox"/> Melissa key 2
<input type="radio"/> a1	Request		<input type="checkbox"/>
<input type="radio"/> a2	Request		<input type="checkbox"/>

2.7 Release 10.0.18.2

Data Quality Studio (DQS) is a new solution from To-Increase that helps companies improve data quality and makes data governance simple in their Dynamics 365 environment. With quality data in the system the reliability of the data that is shown increases, which reduces the chances of making mistakes by users and management.

DQS is created for a functional administrator user with ease of use and flexibility in mind. The data quality administrator creates and manages the functionalities within DQS that can be activated and deactivated at any time. Developers can also call functions to have the same policies executed for specific scenarios. The functionalities in DQS is shared but can be restricted to legal entities directly or part of an organizational hierarchy.

There are various features in DQS for different kind or rules. These rules in DQS do the following to make ensure good data quality:

- Validation rule: Checks if the data meets the defined entered criteria.
- Duplicate check rule: Checks if the data does not have a duplicate value in the defined table.
- Action rule: Uses an action to set a value or to update data in a targeted field.

2.7.1 Validation rules

Validation rules is a functionality in DQS that uses defined criteria (rules) to ensure that data is entered correct in the system. These rules are triggered when you enter data on forms. If the rule is triggered a warning or error message can appear. The messages for users can be set up in the rule; also provided in multiple languages to support international implementations. Within the validation rule there are different types, that you can use to validate the data, these are:

- **Mandatory:** It is mandatory to enter a value in the field/record.
- **Blank:** Validates if the field/record is left blank.
- **Range expressions:** A validation is done if value is within the defined range.
- **Data pattern:** A validation is done if a field/record matches a predefined data pattern.
- **Web service:** A validation is done if a value matches in another internal or external source, by making use of a web service.
- **Custom:** A validation is done by making use of a custom created class with x++ coding.

2.7.2 Duplicate check rule

The duplicate check rule is a functionality that is used to check if there is no duplicate value in the defined table. A few examples where the duplicate check rule is useful to use are:

- Product name
- Social security number
- External item ID per customer or vendor

The duplicate check helps you prevent duplicate values, which can help prevent confusion for users.

2.7.3 Action rule

Action rules is a functionality that is used to populate values into a target field. This will support in quicker data entry or ensure correct values are used in certain fields. When creating a new record, enter a value in a field or before save the record, the application can enrich data. There are several action types that can be used:

- **Fixed Value:** Populates a predefined value in the selected target field.
- **Data query:** Make use of a dynamics query or inquiry to find a value to populate the selected target field.
- **Transformation lists:** Make use of a transformation list to find a value to populate the target field.
- **Number sequence:** Make use of a number sequence to populate the target field.
- **Web service:** Makes use of a web service to get a value from another internal or external source to populate the target field.
- **Custom:** Makes use of a custom action class, to populate the target field.

2.7.4 Organization assignment

Initially a data quality policy will be executed in all legal entities. A DQS policy can be assigned to a single legal entity or multiple legal entities. The policy can also be assigned to organizational hierarchies, which can also be set up in DQS, via the Data Quality hierarchy purposes. When organizations are assigned, the rules will be effective only for the legal entities as per setup.

2.7.5 Data patterns

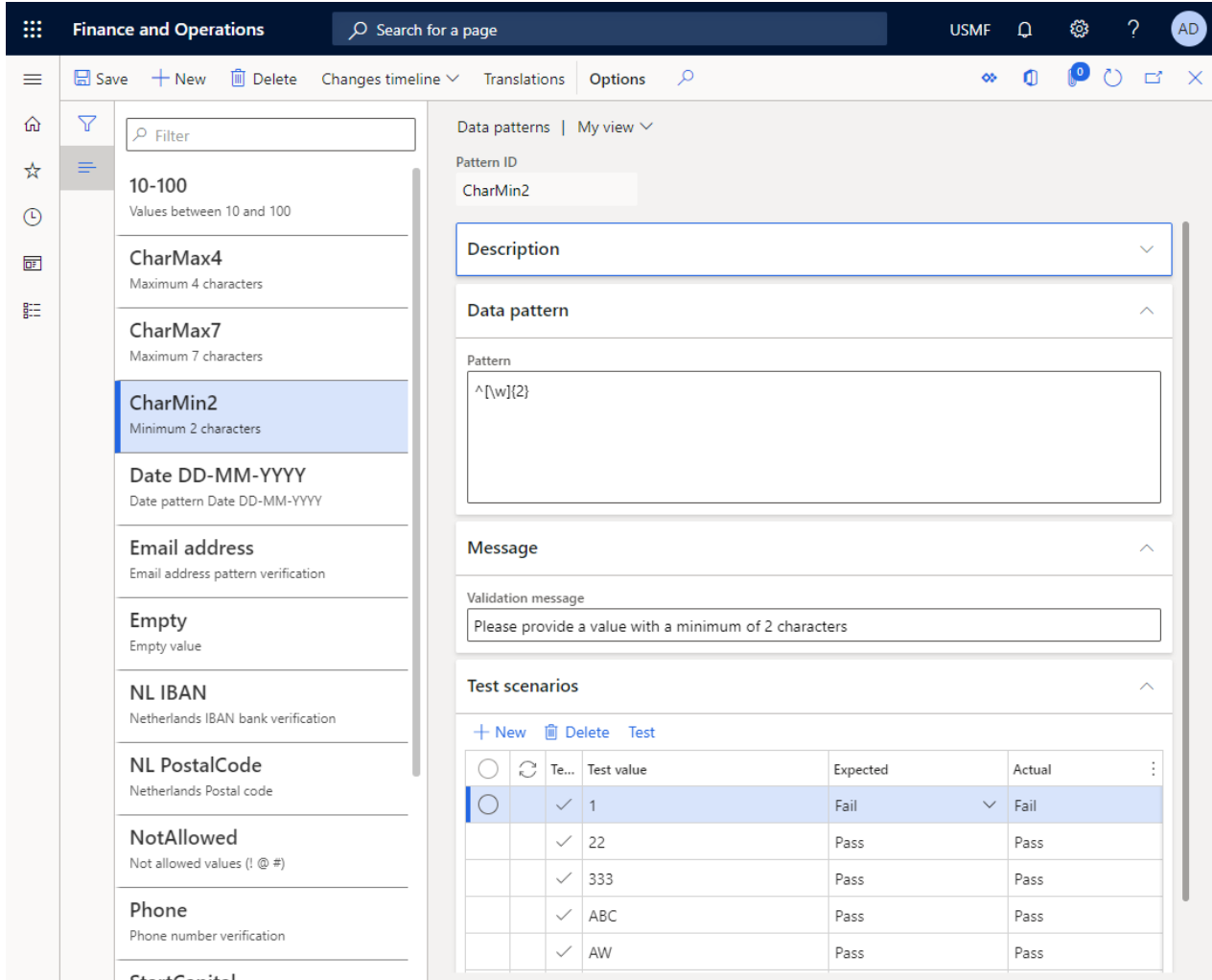
Data patterns are used in Validation rules functionality. A data pattern is a criterion that is set up that a value should meet. A few examples of these criteria are the following:

- That a value must start with a capital letter.
- That a value must have a certain number of characters.
- That a value must meet the criteria of an email address.
- That value must meet the criteria for a zip-code of defined region.

The data patterns are setup with regular expressions which is an open source standard for text patterns. There is a lot of information and examples on the internet, e.g.:

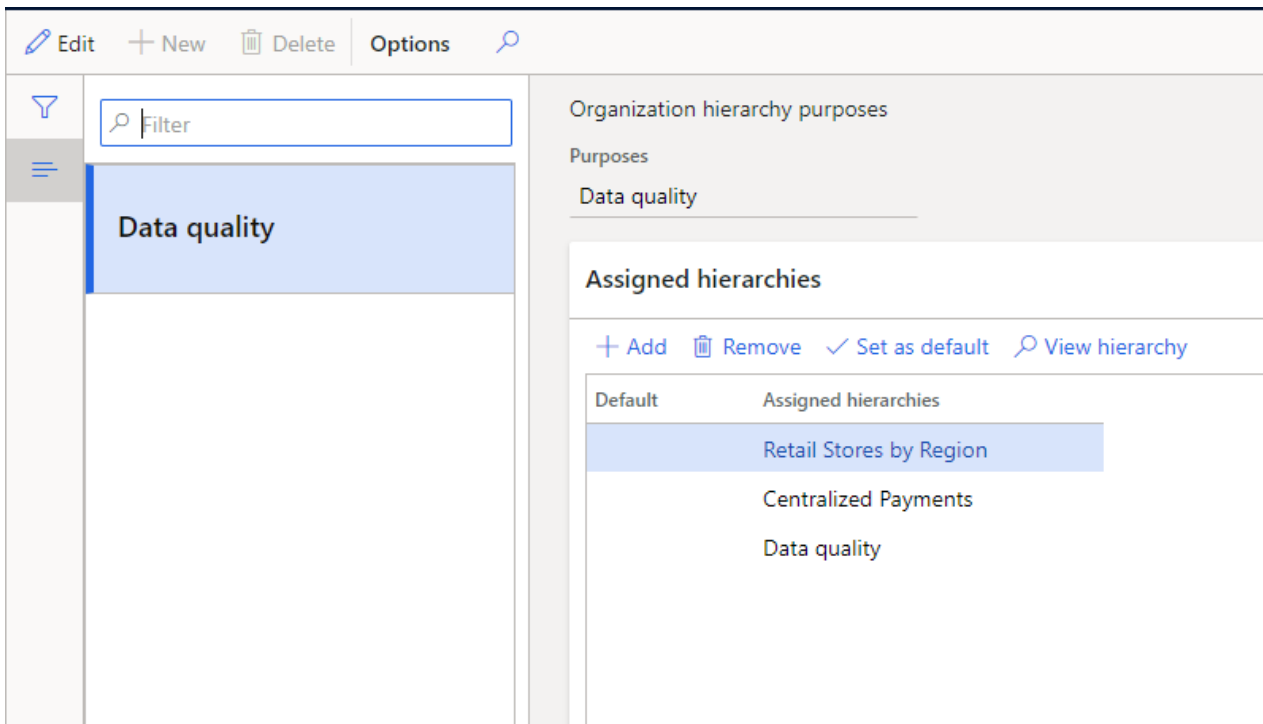
https://en.wikipedia.org/wiki/Regular_expression
<https://www.regular-expressions.info/>
<https://regexpr.com>

In the Data pattern screen a test can also be carried out to see if the created data pattern meets the desired outcome.



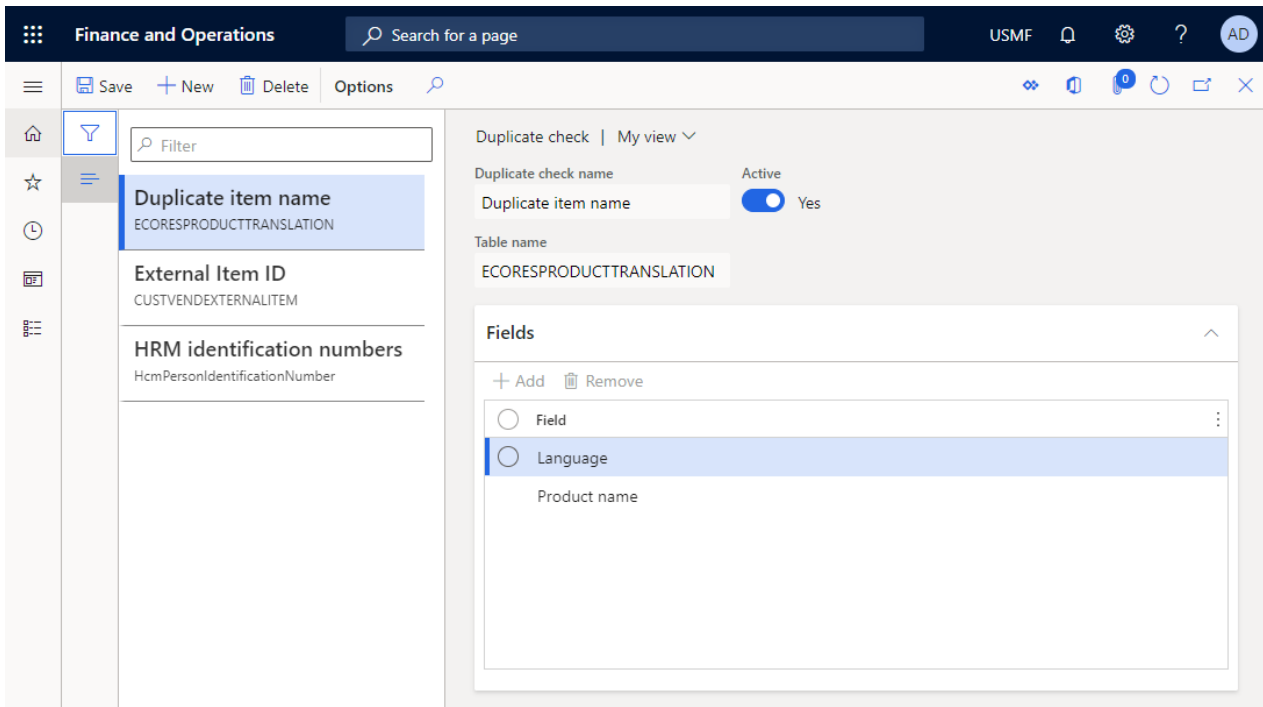
2.7.6 Data Quality organization hierarchy purposes

An organization hierarchy can be set up, which can be used in Organizational assignment in DQS. Various organization types can be used for the hierarchy; only the legal entities are functionally used to determine in what legal entity the rules will be effective.



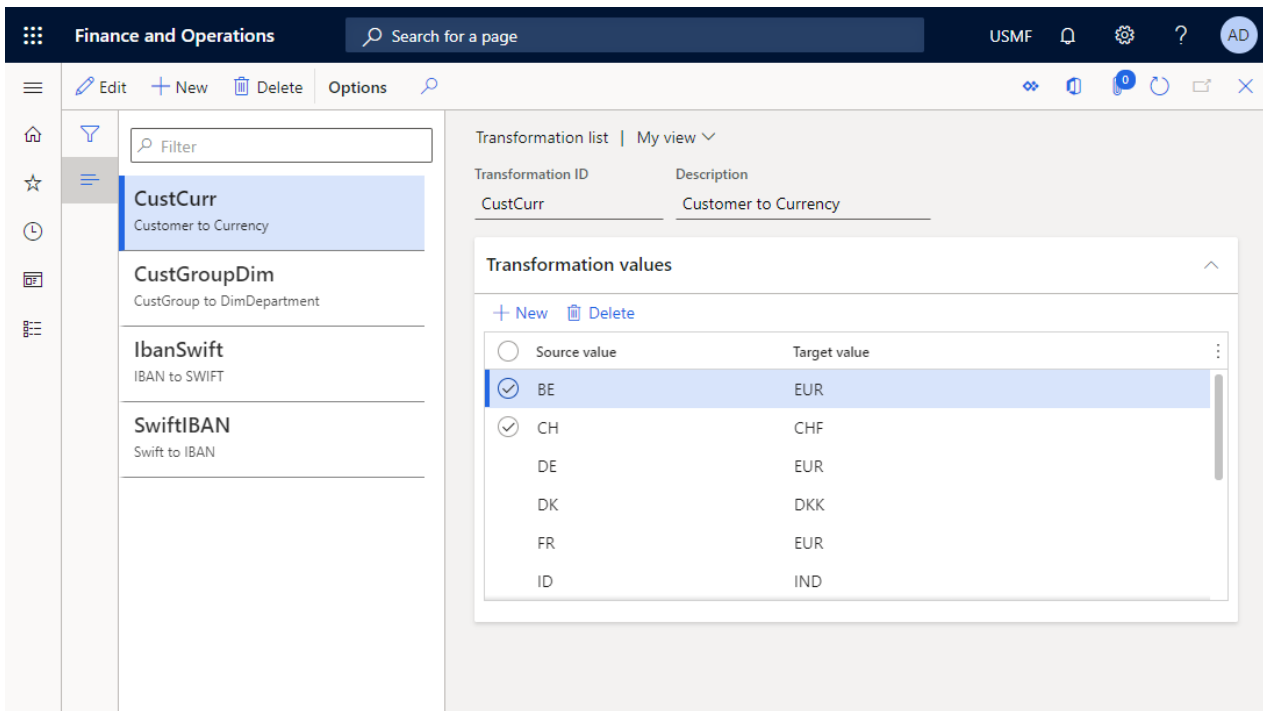
2.7.7 Duplicate checks

Duplicate checks can be set up to check if a value already exists in a table. The duplicate checks can be set up to check if a single value already exists in a table or that a combination of values need to be first met in order for the duplicate check value to be triggered.



2.7.8 Transformation list

In the transformation list which is used in validation rule can be set up with a source value and a target value. The source value is the value that triggers the output for the target field. An example of a transformation list is currency. If the area code is NL (the Netherlands) the output in the currency field will be Euro.



2.7.9 Web services

In the web services setup page, a set up for the web service that will be used will be made. The following can be set up in this page:

- Web service URL with a related certificate
- Request method (Get or Post)
- Response
- SOAP (Simple Object Access Protocol)
- Parameters

Finance and Operations USMF

Web services | Standard view

Web service ID: VAT number | Description: EU VAT number validation | Active: No

General

Web service URL: | Certificate:

Settings

REQUEST	RESPONSE	SOAP
Request method: <input type="text" value="POST"/>	Accept: <input type="text" value="application/xml"/>	Use SOAP envelope: <input checked="" type="checkbox"/> Yes
Content type: <input type="text" value="application/xml"/>	Accept encoding: <input type="text"/>	Message pattern: <pre><soapenv:Envelope xmlns:soapenv="http://schem as.xmlsoap.org/soap/envelope /" xmlns:urn="urn:ec.europa.eut</pre>
Custom request handler: <input type="text"/>	Custom response handler: <input type="text"/>	

Parameters

+ Add Remove Up Down

	Parameter name	Direction	Parameter value	Path expression
<input checked="" type="checkbox"/>	urn:countryCode	Request		/*[name()='soapenv:Envelope']/*[name()='soapenv:Envelope']
<input type="checkbox"/>	urn:vatNumber	Request		/*[name()='soapenv:Envelope']/*[name()='soapenv:Envelope']
<input type="checkbox"/>	valid	Response		/*[name()='soap:Envelope']/*[name()='soap:Body']/*

3. Bug Fixes

3.1 Current release

ID	Title
165889	Internal - Parameters Up and Down are not moving records correctly on Web services form. On the Parameter fast tab of the Web service page, the up and down button must move the selected parameter up and down as selected by the user.
171427	Internal - After deleting Policy From data quality policy page it's not getting displayed in retired data quality policy page. This fix will ensure that the deleted policy must appear on the <i>Retired Data Policy</i> page.
176659	Internal - Range expression as a Field validation and record validation is not working if outcome is warning. For the regular expression validation, if the warning message is configured, then while adding a record if the validation fails, then the warning message must appear on the screen.
178415	Internal - Importing action rule results in string error on customer form. This fix will ensure that while importing an action rule the application must not prompt any error message on the related form.

3.2 10.0.36.7

ID	Title
108849	Internal - Table group validation-Warning not working. Parameter settings to determine what type of tables would be allowed to use in quality policies was not giving a warning as per setup. This has been fixed.
108923	Internal - Number sequence validation-Warning not working. Parameter settings to determine if it is allowed to use number sequences setup in other areas of the application was not giving a warning as per setup. This has been fixed.
109384	Internal – Dimension field support known issues. Action rules did not work for financial dimensions and array type of fields. This has been implemented in this release.
171864	Internal - Range expression not working correctly for decimal and integer value '0'. In case a range was set for e.g. 0..400, this was giving an error in case the value was 0. This has been fixed.
173341	Internal - Dynamic query framework - Functions refresh does not populate custom DQFFunctionRun classes Custom functions are now refreshed correctly.
174104	Internal - Error when creating a new contact for vendor. We found a regression with showing financial dimensions for new customer creation. This error has been fixed.

174546	Internal - Fuzzy duplicate check throws error if a non-string field is present in the query. This has been fixed.
176127	CS00227171 Empty record is created in the table, while creating a new record without a form name. On the Dynamic menu form setup, it was possible to create a setting with an empty form name where the table setting would require a value for this field. As this might be related to a specific bug on the grid control from Microsoft, we implemented an additional validation to prevent having the setup with an empty form name possible.
176128	CS00227170 Error "You're not allowed to access this page" error message when creating customers/prospects for all users except system administrators. This was due to a missing security validation for fuzzy logic duplicate checks. This issue has been fixed by evaluating the user permission before executing a duplicate check.

3.3 10.0.34.6

ID	Title
115327	Action rule not working for financial dimension of customer table In case with an action rule dimension values were filled, upon customer creation, the values were not applied. It got overwritten by the default dimension settings on customer groups. This has been fixed where the dimensions will now be merged instead of overwritten.
170616	Dynamic Query Framework - Preview results are not showing correctly when same table is created in query multiple times. The framework has been enhanced to cover this scenario in the correct way.
170452	Copy DQS policy is not copying the 'Use as response' and 'Configurable lookup' fields. This has been fixed.

3.4 10.0.32.5

ID	Title
138116	Parameters not updating correctly on changing webservice for validation rule or action rule in data quality policy. Now when changing the webservice on a validation or action rule, the user will be asked for a confirmation to change the setting. After the confirmation, the list with request and response parameters will be refreshed.
164014	Duplicate checks is throwing a duplicate error when the new record is created with blank field. In case duplicate checks has been set up for non-mandatory fields, the value could be left blank. In that case, the duplicate check was not working correctly. This has been fixed.
164867	Error "Global::inRange Unknown type: AnyType" when executing webservice validations. In case the webservice did not return a field which was set as response parameter, the mentioned error could be thrown to the user. We changed the logic to capture the error and assume it should be treated as a not valid webservice validation.

165408	<p>Validation rule with web service does not work as expected when output parameter is compared with blank value.</p> <p>When we expected an empty value as a valid response, the logic was returning an incorrect validation result. This has been fixed.</p>
165409	<p>Web services parameter setup allows blank parameter name.</p> <p>We changed the validation. Now it is not possible to setup a request or response parameter without a name specified.</p>
165410	<p>Validation required to ensure webservice has at least one response parameter with "Use as response parameter" checked.</p> <p>To ensure proper setup of the application, there is now a validation added when activating a policy to check if each validation rule with a web service has at least a response parameter activated.</p>
165710	<p>Validation rules and action rules getting saved without policy.</p> <p>When creating a new policy, validation rules and action rules could be created without first having saved the policy. The policy reference was at that time not filled for these rules. This has been fixed.</p>

3.5 Release 10.0.31.4

ID	Title
123762	<p>Enumeration values not easy within action rules.</p> <p>Enumeration fields expected internal integer values. Now you can use the enum label in the current system language.</p>
137873	<p>Error thrown after deleting the policy and creating data quality policy with same ID and Name</p> <p>In case a policy has been retired, a more understandable error is raised to the user.</p>
141398	<p>Error when filling Validation message for a validation rule</p> <p>When creating a rule and add a validation message without manually saving the rule resulted in an error. This has been fixed.</p>
158418	<p>No security implemented for Secured values</p> <p>In release 10.0.28.3 the secured values feature was released, but security artifacts were missing. This has been corrected in this release.</p>
163101	<p>Security issue Dynamic Query Framework.</p> <p>A non-system administrator was able to query data which were not part of the permissions. This has been solved to prevent access to sensitive and private data.</p>
163523	<p>Lookup for custom action rule is empty despite classes meet the condition</p> <p>In certain scenarios the field type for the target field was not evaluated correctly. This has been fixed.</p>

3.6 Release 10.0.28.3

ID	Title
143247	Internal Duplicate check rule not always executed when updating records. The duplicate check logic has been enhanced to cover both inserts and updates in a correct manner.
138571	Internal Custom Response Handler field showing values from the previous selection on data quality policies form
138115	Internal Field and field value not displayed correctly, when webservice is selected in Data quality policy validation rule
127033	Internal Selecting a web service output parameter on the Action rule throwing a warning
127590	CS00177048 Issue in new release product OK button after installing DQS A workaround was to enable DQS. Due to an incomplete condition, the OK button on the product creation dialog was not working. This has been fixed.

4. Common Features

To-Increase is offering various add-on solutions. Some features and technical solutions are common or could be common for all our solutions on the Dynamics 365 Finance and Operations platform. As of November 2022, we are leveraging a new common library model.

The common library model will be a centralized location where the new common features will be added automatically, and customers don't have to make an additional effort to update the build pipelines after the first enablement of this model.

ISV licensing is technically supported with a code signing certificate. The certificate we must use expires every three years, next up for renewal in 2023. Soon, our solutions will refer to this common model for the code signing certificate, instead of maintaining it separately in all our solutions.

Next to technical content, the common library comes with features which are beneficial to our customers. E.g. a Solutions Management dashboard gives a clear view of currently installed versions, status of license, option to renew licenses without any downtime, easy access to release notes and documentation, and the ability to leave feedback through the in-app feedback system.

Standard view ▾

To-Increase solution management

All

Filter Installed only

Solution	Installed version	Status
Advanced Discrete Manufacturi...		×
Advanced Project Management		×
Anywhere Mobility Studio		×
Business Integration Solution	10.0.99.999	☑
Data Entry Workflow		×
Data Modeling Studio		×
Data Quality Studio	10.0.18.2	🔄
DynaRent	10.0.28.43	🔄
PLM Integration for Engineerin...		×
RapidValue BPM Suite	10.0.26.37	☑
Security and Compliance Studio		×

Advanced Discrete Manufacturing

SOLUTION IS NOT INSTALLED

Solution description

Help manufacturers solve problems and streamline process flows.

License	Status	Expiry date
Construction	🔒	
Equipment	🔒	
Advanced Project Management	🔒	
Product Engineering a	🔒	

License description

On all To-Increase forms, there is on the left-top of the forms a smiley icon in the menu where you can provide us feedback, suggestions, and ideas so we can learn how improve our solutions.

?

To-Increase would love your feedback!

Please rate your experience in using the All solutions screen.

- 5 - Excellent
- 4
- 3
- 2
- 1 - Poor

Please tell us why you chose the rating. Additional insights would help us improve our products further.

Thank you for providing us feedback!

Your privacy is important to us. To protect your privacy, please don't include any personal information.

Submit

Cancel

5. Known Issues and limitations

In this section the known issues and limitations that are currently in DQS will be highlighted. These issues or limitations can also be due to standard Dynamics 365 limitations. Known issues and limitations:

- Released product creation dialog form: Today, only validation and duplicate check rules are supported. Action rules will be implemented in a future release.
- Providing a value for enum fields as target in action rules is not accepting the label; in the current release the integer value should be provided. E.g. 'NoYes' will need a value as 0 for 'No' and 1 for 'Yes'. This will be enhanced a next release.
- The duplicate check with fuzzy matching is not working together with an advanced dynamic query where the same table is used multiple times. This will be solved in a next release.

In general, the Data Quality Studio solution can work for any regular table and field, regardless if it is part of the standard, an ISV solution, customization or configured custom field. The events will be executed on forms with a data source. There are various places in the application where forms don't have a data source or where x++ coding is used to insert or update records. One example is the product creation dialog form in the standard application. On this form, there is no data source used at all; only at time of closing the dialog, the tables will be populated and inserted in the database. We have extended the logic, so it can check for valid data entry. We have also done this in several other places where we found a gap during the development and testing. If there is any use case where the rules are not executed as intended, please contact us, so we can verify if and how this should be supported.

If you are using action rules, in certain cases, the values updated in the target fields can be overwritten by standard business logic. Test the scenarios carefully before applying it in your production environment.

Together with the solution, we provide tutorials as separate model for custom extensions on validation rules. The tutorials are provided 'as-is' and not supported as part of the main application. The tutorials are for learning purposes. Before using them in a production environment, you must verify if they will work as per your expectations.

Microsoft is continuously adding new features in the application directly and via Feature Management. Sometimes these are public preview and will be made generally available in future releases, in other cases, they are already general available, and you have the choice to activate them. Currently, we are not testing compatibility with all new features or combinations. Once a feature is enabled at the customer environment and in case of any issues or questions related to new standard features and our solutions, kindly contact us via To-Increase support.