



PUBLIC

How-To Create Data Quality Rules and Trigger Data Quality Evaluations

Applicable Releases:

SAP Master Data Governance in SAP S/4HANA 1909 or higher

Version 1.2

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Document History

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1.0	First official release of this guide
1.2	Formal update

Table of contents

Introduction	4
Scenario 1.....	4
Step by Step Implementation Guide.....	4
Define Data Quality Rule	4
Data Quality Evaluation	13
Scenario 2.....	15
Step by Step Implementation Guide.....	16
Define Data Quality Rule	16
Run Data Quality Evaluation.....	27
Data Quality Rule Evaluation for Change Request Processing (Rule Stage = MDF)	27
Data Quality Rule Evaluation for Master Data Quality (rule stage = MDQ)	31
Data Quality Rule Evaluation for Mass processing (Rule Stage = MASS)	34

The screenshot shows the SAP Validation Result interface. At the top, there are search and filter options. Below is a table header with columns: Overview, Basic Data, Description, Class Assignment, Characteristics, Dimensions, GTIN, Sales Data, Plant Data, Tax, MRP News, Production Version, Inspection Lot, Forecasting, Production Resources/Tools, Storage Location, Warehouse, Warehouse Storage Type, Accounting, Material Ledger General, and Material Ledger Pmt. The table body contains 5 records, all of which are standard. The first record has a detailed message list open, showing 9 messages. A red arrow points to this message list.

Overview	Basic Data	Description	Class Assignment	Characteristics	Dimensions	GTIN	Sales Data	Plant Data	Tax	MRP News	Production Version	Inspection Lot	Forecasting	Production Resources/Tools	Storage Location	Warehouse	Warehouse Storage Type	Accounting	Material Ledger General	Material Ledger Pmt
Records (5) Standard																				
Product	Material Description	Material Type	Base Unit of Measure	Material Group	International Article Number	Details														
00000000000000227	KRP4112019	FERT	"3	01	2150180000000	9 Messages														
00000000000000228	KRP4112019	FERT	EA	02																
000000000000001995	test	FERT	EA																	
000000000000002271	test inspec	FERT	EA																	
000000000000002272	test inspec 2	FERT	EA																	

38

Introduction

The Data Quality Management capabilities of SAP Master Data Governance (SAP MDG-DQM) enable you to define data quality rules and data quality key performance indicators for product and business partner master data. SAP MDG-DQM also features evaluation of quality of master data and its trend based on the rules defined. There are dedicated apps that provide this functionality for product and business partner master data. Generic versions of these apps and a common framework underneath allow a straightforward support of customer-defined master data objects as well.

This document explains how to create a data quality rule and evaluate data quality based on the previously defined data quality rule. The document also explains how to analyze data quality evaluation results and correct the data flaws detected as part of the data quality evaluation.

Scenario 1

You want to define a data quality rule to ensure that the value in Search term 1 and Search term 2 of a business partner are not equal. A typical rule modelling workflow involves various people with roles like Implementation expert, Rule owner. Following example does not consider this rule modelling workflow, the example describes basic concepts of rule modelling for SAP MDG-DQM.

Step by Step Implementation Guide

The following steps provide individual steps to create a data quality rule, trigger data quality evaluation and analyze and correct data quality evaluation results.

Define Data Quality Rule

1. Launch Fiori Launchpad → Navigate to the Fiori Tile Group *Data Quality Management for Business Partners* → Click on the tile *Data Quality Rule Business Partner* to launch the app.



2. Click on + (Add) button to create a new data quality rule.

The screenshot shows the SAP Data Quality Rules for Business Partners interface. At the top, there's a navigation bar with the SAP logo and the title "Data Quality Rules for Business Partners". Below the title, there's a dropdown menu labeled "Standard *". Underneath the dropdown, it says "Not Filtered". On the right side of the header, there are several icons: a magnifying glass, a bell, a user profile, and a link icon. In the center, there's a blue button with a downward arrow. Below the header, the main content area has a title "Data Quality Rules (1)". To the right of the title are buttons for "Export", "Delete", a blue plus sign, a gear icon, and a refresh icon. A red arrow points to the blue plus sign button. Below these buttons, there's a table header with columns: Rule, Base Table, Checked Field, Rule Owner, Implementation Expert, Score, and Status.

3. Enter the header information of the rule as follows:

Note: Fields Marked with red asterisk ***** are mandatory fields.

This screenshot shows the "Header" tab of a Data Quality Rule configuration screen. The rule is titled "ZDQM_SEARCH_TERMS_EQUAL" with the description "Search Term Should Not be Equal". The tab navigation includes Header, General Information, Usage, Implementation, Dimensions, Additional Information, and Administrative Data. The Header tab is selected. There are four fields highlighted with red circles and numbers:

- Rule ID:** * (1) - Value: ZDQM_SEARCH_TERMS_EQUAL
- Base Table:** (2) - Value: BUT000
- Rule Name:** * (3) - Value: Search Term Should Not be Equal
- Checked Field:** (4) - Value: BUT000-BU_SORT1

On the right side of the screen, there's a status indicator: "Status: New".

4. Enter the values for fields in the *General Information* tab as shown below.

The tab *General Information* has fields which are typically filled by the rule owner. These fields provide more information about the rule and why the rule is being created. This tab also designates to who the rule owner is and who is the implementation expert of the rule.

ZDQM_SEARCH_TERMS_EQUAL
Search Term Should Not be Equal

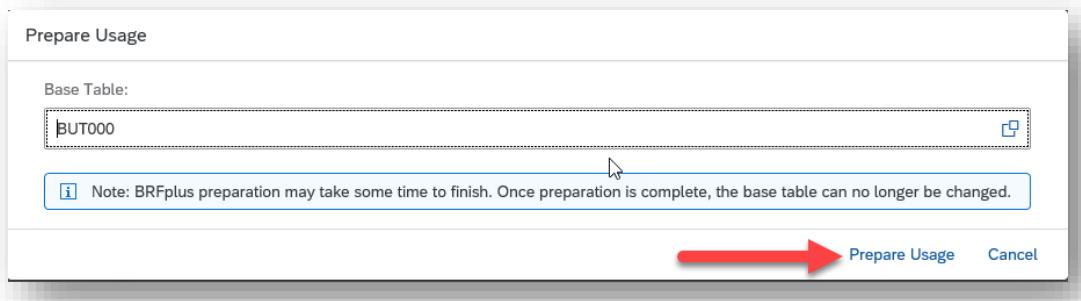
Header	General Information	Usage	Implementation	Dimensions	Evaluation	Additional Information	Administrative Data
Business Details <p>Business Description: The value of search term 1 must not be equal to the value of search term 2. 1</p> <p>Business Reason: We do not want to store redundant information. 2</p> <p>Scope: All active business partners. 3</p> <p>Link Text to Display: Corporate Standards 4</p> <p>Link URL: https://example.com 5</p>				Contacts <p>Rule Owner: 6</p> <p>Implementation Expert: 7</p> <p>Business Contact: Charles Darwin 8</p> <p>Data Owner: MDM Team(Business Partners) 9</p>			

After entering the information on the general information tab click on **Save**.

- The **Usage** tab describes where the rule is to be applied. Currently the rule usage is supported for **Data Quality Evaluation** and **Check in Change Requests** (Central Governance), the support for rule evaluation during consolidation process and mass processing is available from 1909 FPS2 onwards. Once the rule usage is defined, we need to prepare the rule. During the rule preparation, the DQM framework generates BRFplus design time artifacts in the background.

ZDQM_SEARCH_TERMS_EQUAL Search Term Should Not be Equal

General Information	Usage	Implementation	Dimensions	Evaluation	Additional Information	Administrative Data						
Usage <p>Preparing the usage will create BRFplus expressions to implement the rule.</p> <table border="1"> <thead> <tr> <th>Usage</th> <th>Status</th> <th>Usage Action</th> </tr> </thead> <tbody> <tr> <td><input type="radio"/> Data Quality Evaluation</td> <td>Not Ready</td> <td>Prepare + Delete</td> </tr> </tbody> </table>							Usage	Status	Usage Action	<input type="radio"/> Data Quality Evaluation	Not Ready	Prepare + Delete
Usage	Status	Usage Action										
<input type="radio"/> Data Quality Evaluation	Not Ready	Prepare + Delete										



- Once the preparation is complete, the BRFplus Scope expression and Condition expressions will be created and are available for rule modeling under the tab *Implementation*.

Implementation					
<p>i Check and activate expressions in BRFplus.</p> <table border="1"> <thead> <tr> <th>Scope</th> <th>Condition</th> </tr> </thead> <tbody> <tr> <td> Expression: ZDQM_SEARCH_TERMS_EQUAL_SCP Status: Initial </td> <td> Expression: ZDQM_SEARCH_TERMS_EQUAL_CON Status: Initial </td> </tr> </tbody> </table>		Scope	Condition	Expression: ZDQM_SEARCH_TERMS_EQUAL_SCP Status: Initial	Expression: ZDQM_SEARCH_TERMS_EQUAL_CON Status: Initial
Scope	Condition				
Expression: ZDQM_SEARCH_TERMS_EQUAL_SCP Status: Initial	Expression: ZDQM_SEARCH_TERMS_EQUAL_CON Status: Initial				

The status initial shows that rule modelling is not yet started.

- The scope expression is used to define which records of a business object need to be considered by the rule, for example during data quality evaluation. The condition expression defines the conditions that will be evaluated on in-scope records of business object. A record will be termed as Not Ok if it fails the condition defined in the condition expression. Below we show how to define the scope expression.

■ Boolean: ZDQM_SEARCH_TERMS_EQUAL_SCP

General

Detail

Boolean Logic Schema: <1>

If

Then ▲ Boolean is true, else it is false

Context Query

Result list: 103 objects found

Object	Status	Type	Value
2nd prefix		Text	ZMDD_147
Academic Title		Text	ZMDD_147
Address Number		Text	ZMDD_147
Archiving Flag	Active	Boolean	ZMDD_147
Authorization Group		Text	ZMDD_147

Context menu (open over 'Context'):

- 1 Use Direct Value Range From...
- 2 Select Operand...
- 3 Data Origin
External Number
Grouping
Partner cat.
Partner Type
Search term 1
Search term 2
Source ID
Source System
Title
More... 3
- Create Expression...
- Remove Operand
- Add Opening Bracket
- Add Closing Bracket
- Add Not Operator
- Add Condition
- Delete Condition

Buttons at the bottom: Search, Clear, Reset, Ok, Cancel.

■ Boolean: ZDQM_SEARCH_TERMS_EQUAL_SCP

General

Detail

Context Overview | Start Simulation

Boolean Logic Schema: <1>

If

▲ BUT000 K...-Archiving Flag is initial

Then ▲ Boolean is true, else it is false

After activating the expression in BRFplus the status of the condition expression in the data quality rule management app is shown as active.

ZDQM_SEARCH_TERMS_EQUAL Search Term Should Not be Equal

General Information **Usage** Implementation Dimensions Additional Information Administrative Data

Implementation

i Check and activate expressions in BRFplus.

Scope	Condition
Expression: ZDQM_SEARCH_TERMS_EQUAL_SCP	Expression: ZDQM_SEARCH_TERMS_EQUAL_CON
Status: Active	Status: Initial



8. Define Condition expression. The condition is to return not ok (Boolean value false) if Search terms 1 and Search terms 2 are equal else return ok (Boolean value false).

Note: The default value for Boolean is always false, therefore always check for true value.

■ Boolean: ZDQM_SEARCH_TERMS_EQUAL_CON

[Back](#) | [Edit](#) | [Check](#) | [Save](#) | [Activate](#) | [Delete](#) | [More](#)

General

Detail

[Context Overview](#) | [Start Simulation](#)

Boolean Logic Schema: ($<1>$ or $<2>$) and ($<3>$)

If

(\vee

BUT000 K...-Search term 1 is not initial

or \vee

BUT000 K...-Search term 2 is not initial

) \vee

and \vee

(\vee

BUT000 K...-Search term 1 is not equal to BUT000 K...-Search term 2

) \vee

Then Boolean is true, else it is false

After successful definition of the condition expression, the status of the Condition expression in the data quality rule will show Active.

Condition

Expression:
ZDQM_SEARCH_TERMS_EQUAL_CON

Status:
Active

- After successful implementation of the rule, click on *Send for Testing* to send the rule for testing to rule owner.

Scope		Condition	
Expression: ZDQM_SEARCH_TERMS_EQUAL_SCP		Expression: ZDQM_SEARCH_TERMS_EQUAL_CON	
Status: Active		Status: Active	

Dimensions		
Dimension	Category	Impact
No dimensions assigned		

Additional Information		
Use in Central Governance: -	BRFplus Implementation:	BRFplus Implementation:
BAPI Implementation:	BAPI Implementation:	

Administrative Data	
Send for Testing	

- The rule owner should then approve the rule implementation, so that the rule usage can be enabled for data quality evaluation.

Note – If rule owner wants any changes to the rule, rule owner can click on send for implementation to send rule to implementation expert.

ZDQM_SEARCH_TERMS_EQUAL Search Term Should Not be Equal

General Information Usage Implementation Dimensions Additional Information Administrative Data

Implementation

Scope	Condition
Expression: ZDQM_SEARCH_TERMS_EQUAL_SCP	Expression: ZDQM_SEARCH_TERMS_EQUAL_CON
Status: Active	Status: Active

Dimensions

Dimension	Category	Impact
No dimensions assigned		

Additional Information

Use in Central Governance: -	BRFplus Implementation:	BRFplus Implementation:
BAdI Implementation:	BAdI Implementation:	

Administrative Data

Approve Send for Implementation

- Once the rule owner approves the rule implementation the status of the rule will change to **Approved**.

ZDQM_SEARCH_TERMS_EQUAL Search Term Should Not be Equal

Base Table: General (BUT000) Status

Checked Field: Search term 1 for business partner (BUT000-BU_SORT1) **Approved**

- Enable the rule for usage in Data Quality evaluation. Click on *Enable* under the tab *Usage*.

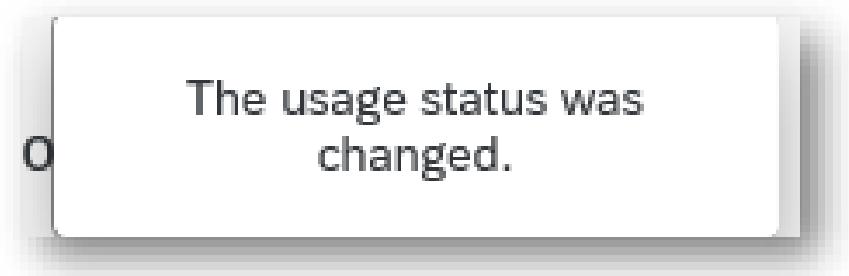
ZDQM_SEARCH_TERMS_EQUAL Search Term Should Not be Equal

General Information Usage Implementation Dimensions Additional Information Administrative Data

Usage

Usage	Status	Usage Action
Data Quality Evaluation	Disabled	Enable

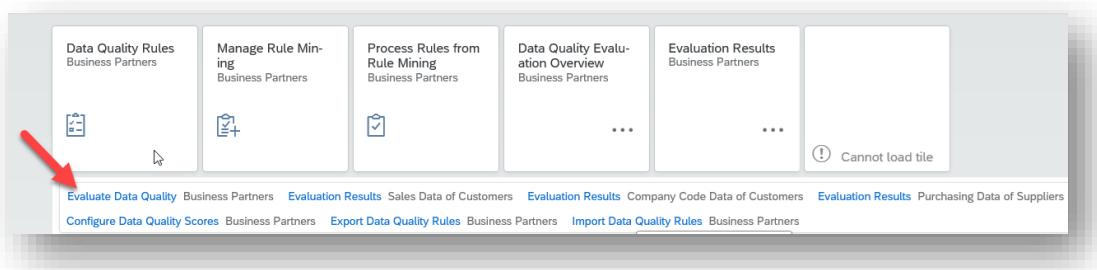
We get below message when the rule usage is successfully enabled.



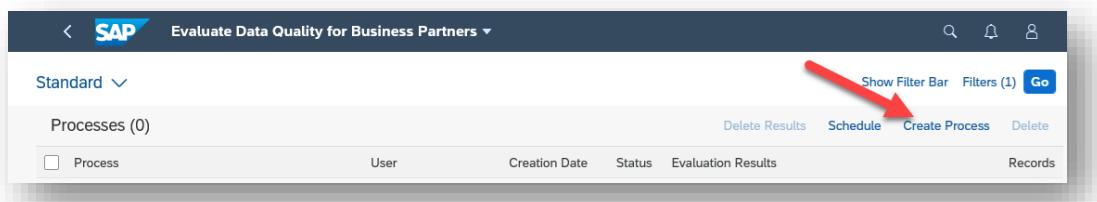
Data Quality Evaluation

Data Quality evaluation runs the data quality rules on all the data in active area which satisfy the conditions defined in the scope expression of data quality rules.

- 1) Trigger Data Quality Evaluation by Clicking on the link Evaluate Data Quality



- 2) Click on Create Process to create Data Evaluation Process.



- 3) Enter Description (optional) ->Select Process Template->Click on Save



- 4) Click on Start

SAP Data Quality Evaluation Process

Process ID: 563

Data Quality Evaluation for BP

Process Template: SAP: Data Quality Rule Evaluation for BP

Process Goal: Data Quality Evaluation

0 Selected Records

Saved (Not Started)

0% Progress Bar

Evaluation

Step Configuration (Evaluation)

Check Point: OFF

Process Using: Evaluation Adapter

Configuration: Evaluate with Scores

Provide Scores for Dimensions: ON

Evaluation Configuration

Previous Evaluations

Delete Results: ON

Evaluations with Retained Results: 2

Delete Scores: ON

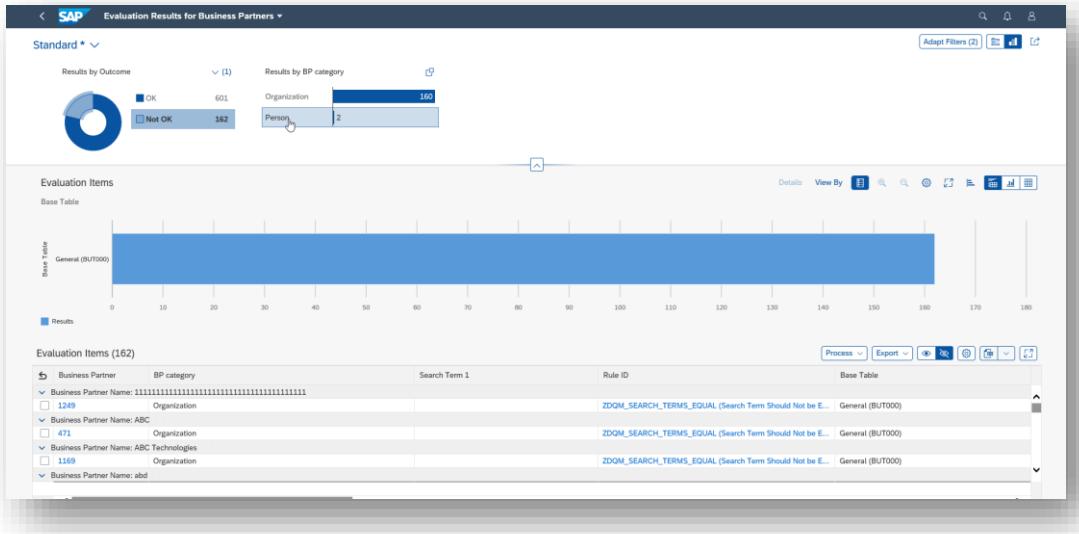
Evaluations with Retained Scores: 20

Start Retry Rollback Save Delete Show Audit Trail

- The data quality evaluation runs (duration depends on volume and number of rules). After completion of evaluation the evaluation KPI will be displayed as shown below



- Click on **Analyze Results** to check the results in detail. Note – You can click on **Process** to trigger a remediation process.



Scenario 2

You want to define a data quality rule for each sales area that is defined for a product, the MRP group of the plant that is defined as the delivery plant for this sales area needs to have a value that is defined by the item category group, as specified for the sales area.

The scenario is explained in the below screenshot. Sales area 0001 and Distribution Channel 01 has 0001 as delivery plant. The MRP group defined for plant 0001 (Which is defined as delivery plant for the sales area) should be equal to Item Category group defined at the sales area.

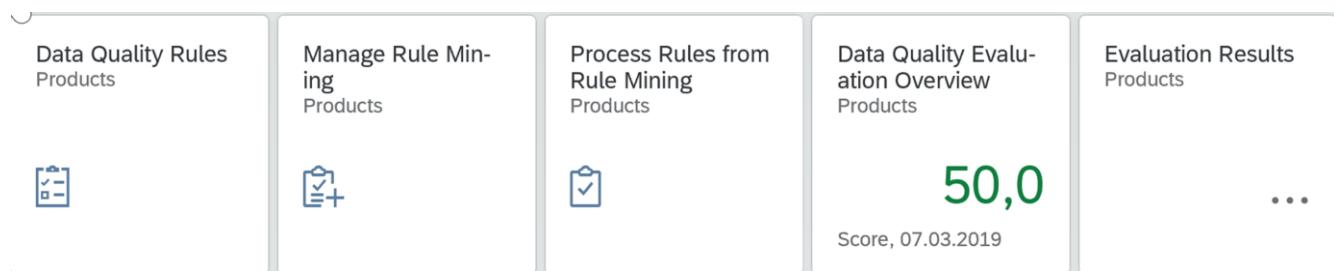
The figure consists of three screenshots of SAP Fiori screens. The first screen shows a material master record with various data fields like Sales Org, Plant, and Material Group. The second screen shows a similar view with some different configurations. The third screen is identical to the first but includes a callout bubble with the text: "Item Category group Should be equal to MRP Group". Red arrows indicate a flow or comparison between the screens.

Step by Step Implementation Guide

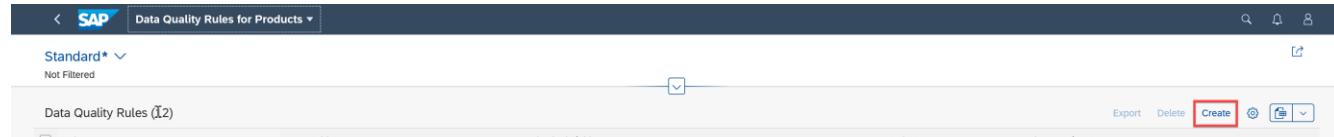
The following steps provide individual steps to create a data quality rule, trigger data quality evaluation and analyze and correct data quality evaluation results.

Define Data Quality Rule

1. Launch Fiori Launchpad → Navigate to the Fiori Tile Group *Data Quality Management for Products* → Click on the tile *Data Quality Rule Product* to launch the app.



2. Click on Create button to create a new data quality rule.



3. Enter the *Header* information of the rule as follows:

Note: Fields marked with red asterisk are mandatory fields.

Note: It is not mandatory to enter rule name starting with Z. We are following general customer practice. You are free to enter rule ID according to your configuration guidelines.



ZMRP_GRP_ITEM_CATEGORY

MRP Grp equal to Sales area Item Category

Header General Information Usage Implementation Dimensions Additional Information Administrative Data

Rule ID: *	Base Table:	Status:
ZMRP_GRP_ITEM_CATEGORY	MVKE	New
Rule Name: *	Checked Field:	
MRP Grp equal to Sales area Item Category	MVKE-DWERK	

- Enter the *General Information* data of the rule as shown below

ZMRP_GRP_ITEM_CATEGORY
MRP Grp equal to Sales area Item Category

Header General Information Usage Implementation Dimensions Additional Information Administrative Data

Business Details		Contacts
Business Description:	Sales area that is defined for a product, the MRP group of the plant that is defined as the delivery plant for this sales area needs to have a value that is defined by the item category group as specified for	Rule Owner: CHEEKOTI
Scope:	All the Sales Area data of Materials which has delivery Plant defined.	Implementation Expert: CHEEKOTI
Business Reason:	Link Text to Display: Product Standards	Business Contact: Charles Darwin
	Link URL: https://products.standards.company.com	Data Owner: MDM Team(Products)

- After entering the information on the general information tab click on Save.
- In *Usage* Section, add the usage of the rule. In the current example we will defining following usages.
 - Data Quality Evaluation – Rule is triggered when Data Quality Evaluation is started.
 - Check in Change Requests – Rule is triggered, during the change request processing in MDG – Central Governance.
 - Check in Consolidation – Rule is triggered during the validation step of a Consolidation process.
 - Check in Mass Processing – Rule is triggered during the validation step of the Mass Processing Process.

ZMRP_GRP_ITEM_CATEGORY

MRP Grp equal to Sales area Item Category

General Information Usage Implementation Dimensions Additional Information Administrative Data

(i) Preparing the usage will create BRFplus expressions to implement the rule.

Usage	Status	Usage Action
<input checked="" type="radio"/> Data Quality Evaluation	Not Ready	Prepare
<input type="radio"/> Check in Change Requests	Not Ready	Prepare
<input type="radio"/> Check in Consolidation	Not Ready	Prepare
<input type="radio"/> Check in Mass Processing	Not Ready	Prepare

- Click on **Prepare** for each rule usage to create BRFplus expressions.

ZMRP_GRP_ITEM_CATEGORY

MRP Grp equal to Sales area Item Category

General Information Usage Implementation Message Dimensions Additional Information Administrative Data

Usage	Status	Usage Action
<input checked="" type="radio"/> Data Quality Evaluation	Disabled	Enable
<input type="radio"/> Check in Change Requests	Disabled	Enable
<input type="radio"/> Check in Consolidation	Disabled	Enable
<input type="radio"/> Check in Mass Processing	Disabled	Enable

- Click on **Send for Implementation** button, to send the rule to Implementation expert.

ZMRP_GRP_ITEM_CATEGORY

MRP Grp equal to Sales area Item Category

General Information Usage Implementation Message Dimensions Additional Information Administrative Data

Data Owner:
MDM Team(Products)

Usage

Usage	Status	Usage Action
<input checked="" type="radio"/> Data Quality Evaluation	Disabled	Enable
<input type="radio"/> Check in Change Requests	Disabled	Enable
<input type="radio"/> Check in Consolidation	Disabled	Enable
<input type="radio"/> Check in Mass Processing	Disabled	Enable

Implementation

(i) Check and activate expressions in BRFplus.

Scope Condition

Expression: ZMRP_GRP_ITEM_CATEGORY_SCP Status: Initial Expression: ZMRP_GRP_ITEM_CATEGORY_CON

Approve Send for Implementation

Once the rule has been sent for implementation successfully below message is displayed on the UI.

The rule status was changed.

- Proceed with rule implementation, by first clicking on scope expression.

ZMRP_GRP_ITEM_CATEGORY
MRP Grp equal to Sales area Item Category

General Information Usage Implementation Message Dimensions Additional Information Administrative Data

Check and activate expressions in BRFplus.

Scope	Condition
Expression: ZMRP_GRP_ITEM_CATEGORY_SCP	Status: Initial
	Expression: ZMRP_GRP_ITEM_CATEGORY_CON
	Status: Initial

- Define the condition in the scope expression.

Condition to be defined – Skip the record if Delivery plant (field DWERK of table MVKE) is empty.

Boolean: ZMRP_GRP_ITEM_CATEGORY_SCP

Back | Display | Check | Save | Activate | Transport | Delete | More

General

Detail

Template | Invert Condition Result | Context Overview | Start Simulation

Boolean Logic Schema: <1>

If

MVKE_DQ_STR-DWERK is not initial Change Edit Operand

Then BOOLEAN is true, else it is false

- After the condition in the scope expression is defined, the status of the Scope expression in the DQM rule will change to Active

ZMRP_GRP_ITEM_CATEGORY MRP Grp equal to Sales area Item Category

General Information Usage Implementation Dimensions Additional Information Administrative Data

Implementation

Check and activate expressions in BRFplus.

Scope

Expression: ZMRP_GRP_ITEM_CATEGORY_SCP

Condition

Status: Active

Expression: ZMRP_GRP_ITEM_CATEGORY_CON

Status: Initial

12. Define the Condition expression. The condition expression will be called by Change Request framework and Consolidation and Mass Processing framework. It is important to differentiate these frameworks because fetching the dependent data (data from table MARC on our case) is different for each framework.
 - a. Define Case expression to check the rule stage and branch the rule processing according to rule stage. The below screenshot shows how Case statement is modelled based on different stages. Note: Ignore the fact that false value is returned for rule stages. We will implement returning of the right value in the following steps.

■ Boolean ZMRP_GRP_ITEM_CATEGORY_CON

[Back](#) | [Display](#) | [Check](#) | [Save](#) | [Activate](#) | [Transport](#) | [Delete](#) | [More](#)

General

Detail

Template | Invert Condition Result | Context Overview | Start Simulation

Boolean Logic Schema: <1>

If

C_CHK_RULE_STAGE

Then **BOOLEAN** is true, else it is false

■ Case: C_CHK_RULE_STAGE, Check Rule Stage

[Back](#) | [Display](#) | [Check](#) | [Save](#) | [Activate](#) | [Transport](#) | [Delete](#) | [More](#)

General

Detail

Context Overview | Start Simulation

Result Type: **Return Value**

Result Data Object: **BOOLEAN**

Case Sensitive:

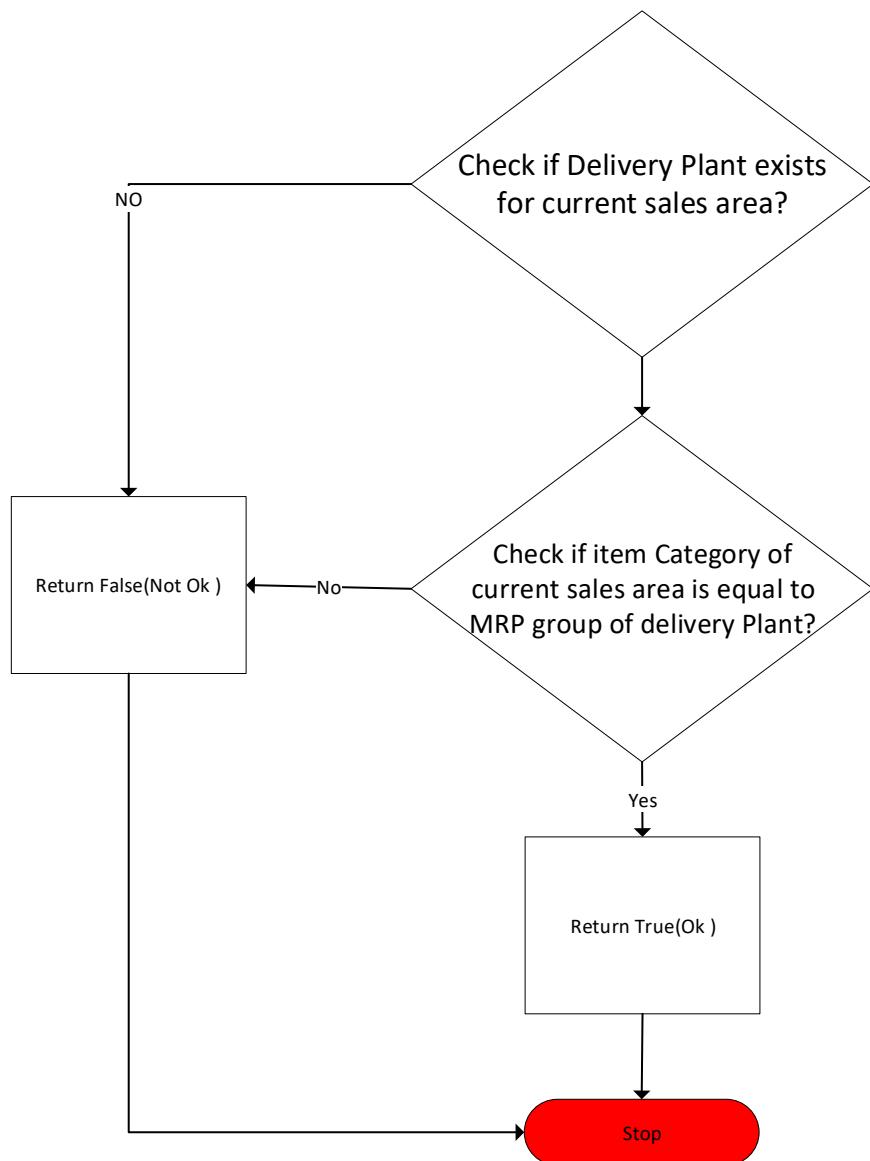
When **EVAL_CON...-RULE_STAGE**

... equals	CONS	Master Data Consolidation	then	False	is returned.	Change
... equals	MASS	Master Data Mass Processing	then	False	is returned.	Change
... equals	MDQ	Data Quality Evaluation	then	False	is returned.	Change
... equals	MDF	Change Request Processing	then	False	is returned.	Change
Otherwise FALSE is returned.						

- b. The rules should be modelled separately for Rules stages for Consolidation related stages (CONS, MASS, MDQ) and Change Request related Rule stage (MDF). While Consolidation related stages involved fetching the data from Consolidation process tables, Change Request Processing rule staging involves getting the dependent data using MDG – Central Governance API¹.
- c. The rule model logic is as follows

¹ The Central Governance API is described in the following Guide.

<https://www.sap.com/documents/2015/07/666e4158-5b7c-0010-82c7-eda71af511fa.html>



- d. Create *Decision Tree* to model the rule for Consolidation related stages like CONS, MASS and MDQ. The following steps show how to model the rules.

Create Object

General data

- Type: **Decision Tree** 1
- * Name: **DT_CHECK_CONSOLIDATION** 2
- Short Text:
- Text: **Rule For Consolidation related Rule Stages.** 3
- Application: **ZMDQ_194**
- Is Reusable:

Result

Result Name: **BOOLEAN** Text: **Boolean**

Possible Result Data Objects

Object	Text	Type
BOOLEAN	Boolean	Element

Expression Triggers Actions

Create **Create And Navigate To Object** **Cancel**

Decision Tree: DT_CHECK_CONSOLIDATION, Rule For Consolidation rela...

General

Detail

Result Type: **Return Value**

Result Data Object: **▲ BOOLEAN**

Node Id

Decision Tree

- **CHECK_DELIVERY_PLANT_EXISTS**
- **ITEM_CATEGORY_EQUALS_MRP_GRP** →
- **TRUE**
- **FALSE**
- **FALSE**

Database Lookup: GET_DELIVERY_PLANT_MRP_GROUP, Get MRP Group of the deliver...

General

Detail

Selection Mode: **Data Retrieval**

Select: **Single Entry** From: **MARC** Plant Data for Material

With Condition: **MATNR** is equal to **▲ MARA_DQ_STR-SOURCE_ID** Change

and

WERKS is equal to **▲ MVKE_DQ_STR-DWERK** Change

Into: **▲ DISGR**

Boolean: CHECK_DELIVERY_PLANT_EXISTS, Check if Delivery Plant Exists

If **▲ MVKE_DQ_STR-DWERK** is not initial Change Edit Operand

Then **▲ BOOLEAN** is true, else it is false

Boolean: ITEM_CATEGORY_EQUALS_MRP_GRP, Check if Delivery Plants MR...

If **▲ MVKE_DQ_STR-MTPOS** is equal to **▲ GET_DELIVERY_PLANT_MRP_GROUP** Change Edit Operand

Then **▲ BOOLEAN** is true, else it is false

- e. Once the decision tree is modelled attach the decision tree expression to the case expression as shown below.

Case: C_CHK_RULE_STAGE, Process Rule Stages

General

Detail

Context Overview | Start Simulation

Result Type: Return Value

Result Data Object: ▲ BOOLEAN

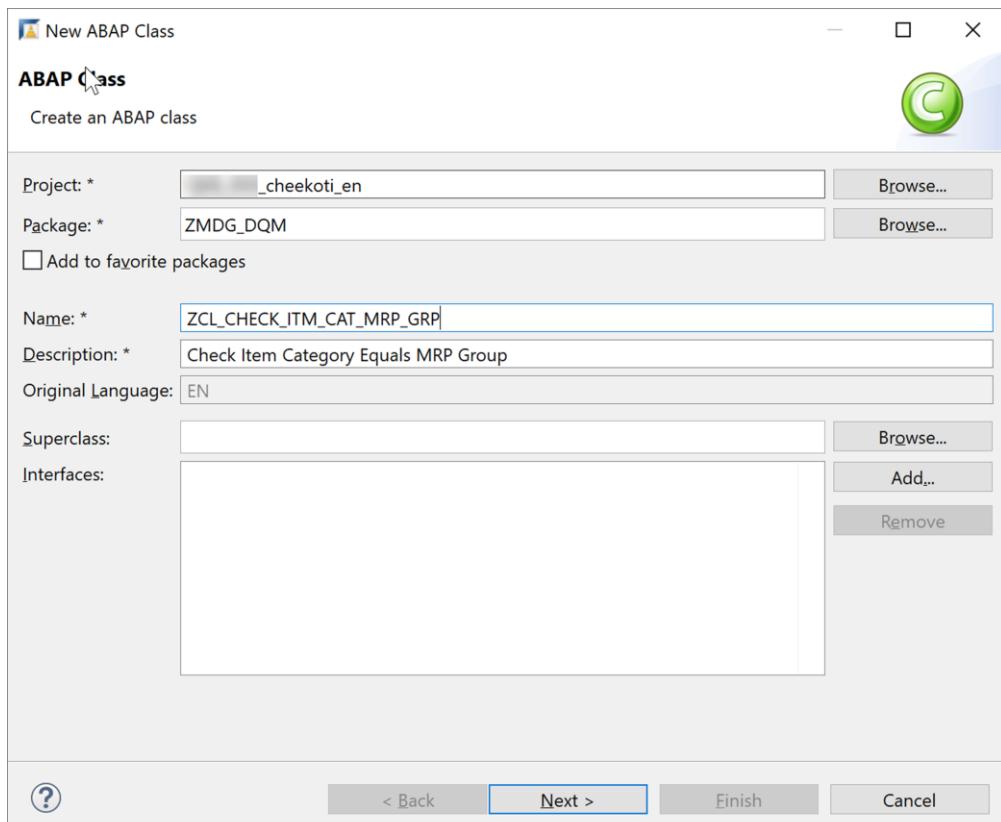
Case Sensitive:

When ▲ EVAL_CON...RULE_STAGE ▼

- ... equals MASS □ Master Data Mass Processing then □ DT_CHECK_CONSOLIDATION ▵ is returned. Change ▽
- ... equals MDQ □ Data Quality Evaluation then □ DT_CHECK_CONSOLIDATION ▵ is returned. Change ▽
- ... equals CONS □ Master Data Consolidation then □ DT_CHECK_CONSOLIDATION ▵ is returned. Change ▽
- Otherwise ▲ FALSE ▵ is returned.

Attach Decision tree for all CMP rule stages

- f. For Change Request Rule processing rule stage, the reading of dependent data should always be done using API. Therefore, it is required to create procedure call BRFplus expression to call a static method of ABAP Class. This ABAP static method encapsulates the code for reading the dependent data using whitelisted API. Following screenshots show how to create this ABAP Class, method² and BRFplus Procedure call expression.



Method Definition:

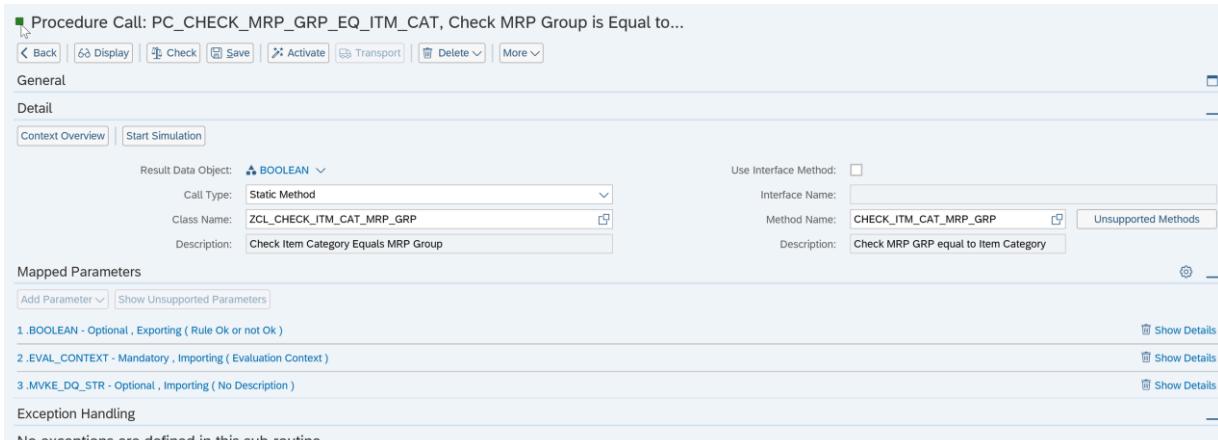
² The code for ABAP class is available in GIT Repository
https://github.com/SanthoshCheekoti/DQM/blob/master/zcl_check_itm_cat_mrp_grp

```

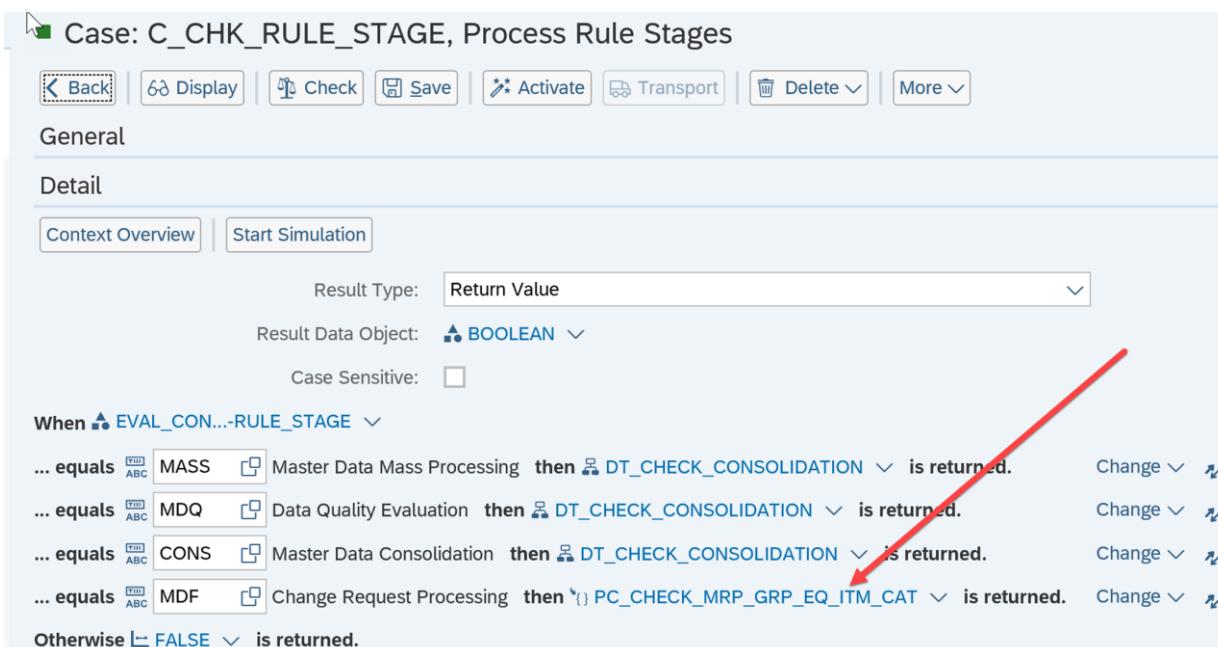
PUBLIC SECTION.
"! <p class="shorttext synchronized" lang="en">Check MRP GRP equal to Item Category</p>
"!
"! @parameter EVAL_CONTEXT | <p class="shorttext synchronized" lang="en">Evaluation Context</p>
"! @parameter boolean | <p class="shorttext synchronized" lang="en">Rule Ok or not Ok</p>
CLASS-METHODS check_itm_cat_mrp_grp IMPORTING eval_context TYPE eval_context_dq_str
mvke_dq_str TYPE mvke_dq_str OPTIONAL
EXPORTING boolean TYPE boolean.

```

- g. Create Procedure call to call the above ABAP static method as shown below.



- h. Attach the procedure call to the parent case expression as shown below.



- i. The modelling of the rules for all the relevant stages is complete.

13. Once Rule implementation is complete, click on send for testing button to send the rule for Approval and Enabling the rule usages.

ZMRP_GRP_ITEM_CATEGORY MRP Grp equal to Sales area Item Category

General Information

Usage

Usage	Status	Usage Action
<input type="radio"/> Data Quality Evaluation	Disabled	<button>Enable</button>
<input type="radio"/> Check in Change Requests	Disabled	<button>Enable</button>
<input type="radio"/> Check in Consolidation	Disabled	<button>Enable</button>
<input type="radio"/> Check in Mass Processing	Disabled	<button>Enable</button>

Implementation

Scope

Expression: ZMRP_GRP_ITEM_CATEGORY_SCP Status: Active

Condition

Expression: ZMRP_GRP_ITEM_CATEGORY_CON Status: Active

Dimensions

Dimension	Category	Impact
No dimensions assigned.		

Additional Information

Send for Testing



14. The rule approver approves the rule and then clicks on the Enable button for all the rule usages.

ZMRP_GRP_ITEM_CATEGORY MRP Grp equal to Sales area Item Category

General Information

Usage

Usage	Status	Usage Action
<input type="radio"/> Data Quality Evaluation	Disabled	<button>Enable</button>
<input type="radio"/> Check in Change Requests	Disabled	<button>Enable</button>
<input type="radio"/> Check in Consolidation	Disabled	<button>Enable</button>
<input type="radio"/> Check in Mass Processing	Disabled	<button>Enable</button>

Implementation

Scope

Expression: ZMRP_GRP_ITEM_CATEGORY_SCP Status: Active

Condition

Expression: ZMRP_GRP_ITEM_CATEGORY_CON Status: Active

Dimensions

Dimension	Category	Impact
No dimensions assigned.		

Additional Information

Approve Send for Implementation



ZMRP_GRP_ITEM_CATEGORY		MRP Grp equal to Sales area Item Category	
General Information		Usage	Implementation
Dimensions		Additional Information	Administrative Data
Usage		Status	Usage Action
<input type="radio"/>	Data Quality Evaluation	Enabled	<button>Disable</button>
<input type="radio"/>	Check in Change Requests	Enabled	<button>Disable</button>
<input type="radio"/>	Check in Consolidation	Enabled	<button>Disable</button>
<input type="radio"/>	Check in Mass Processing	Enabled	<button>Disable</button>
Implementation			

15. Definition to Data Quality rule is complete.

Run Data Quality Evaluation

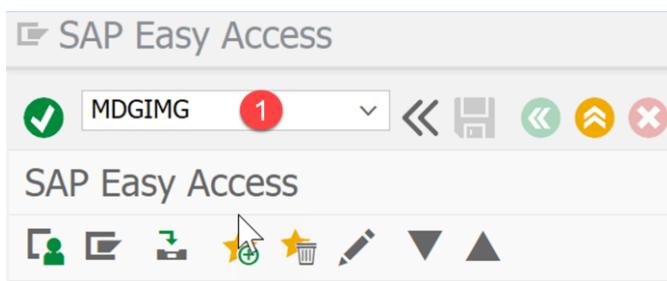
Once the definition of Data quality rule is complete, it is time to run the data quality evaluations for different rule stages. In the following section we will run the data quality evaluations for the below rule stages.

- 1) Master Data Mass Processing (Rule Stage = MASS)
 - 2) Data Quality evaluation (Rule Stage = MDQ)
 - 3) Master Data Consolidation (Rule Stage = CONS)
 - 4) Change Request processing (Rule Stage = MDF)

The following sections will also describe if any additional setting needs to be made to enable rule evaluation for the corresponding stage.

Data Quality Rule Evaluation for Change Request Processing (Rule Stage = MDF)

- 1) Perform below setting in IMG (transaction code MDGIMG) to enable Data quality evaluation for Change request processing.



Structure

- ▽ Master Data Governance, Central Governance 2
- ▽ General Settings
 - General Settings for Financials
 - General Settings for Material
 - General Settings for Business Partner
 - > Technical Settings for Master Data
 - > Data Modeling
 - > UI Modeling
 - > Data Quality and Search
- ▽ Process Modeling 3
 - Define Governance Scope
 - Create Edition Type
 - > Business Activities
 - ▽ Change Requests 4
 - Edit Statuses of Change Requests
 - Create Change Request Type
 - 5 ▪ Configure Properties of Change Request Step
 - Define Priorities for Change Requests
 - Define Reasons for Change Requests
 - Define Rejection Reasons for Change Requests
 - Define Print Form for Change Requests

Change View "Enhancements and Checks per Change Request Step": Overview



Checks and Enrichment Spots	Sequence	Message Output	Relevant	Execution
#00 Basic Check	0	Standard	<input checked="" type="checkbox"/>	Always executed
#01 Authorization Check	0	Standard	<input checked="" type="checkbox"/>	Always executed
#02 Duplicate Check	99	Standard	<input type="checkbox"/>	Executed when data changes
#03 Validation Rules (BRF+)	0	Standard	<input checked="" type="checkbox"/>	Always executed
#04 BADI Validations	0	Standard	<input checked="" type="checkbox"/>	Always executed
#05 Existence Check	0	Standard	<input checked="" type="checkbox"/>	Always executed
#06 Reuse Area Check	0	Standard	<input checked="" type="checkbox"/>	Always executed
9 #07 Validation Rules (Data Qua	0	Standard	<input checked="" type="checkbox"/>	10 Always executed

- 2) Try to perform Change on a material to trigger the Data Quality evaluation for Change request processing. Below steps show how the data quality evaluation is triggered during Change Request processing.

The screenshot shows the SAP Data Quality Management for Business Partners interface. The top navigation bar includes links for Home, Material Master, Data Quality Management for Business Partners, Consolidation for Product Data (highlighted with a red circle 1), Mass Processing for Product Data, Mass Maintenance for Product Master, Material Governance, Master Data Administration, Product Master, Data Quality Management for Products, and Help.

The main area displays various tasks and monitoring tools:

- Charge Requests**: Includes **Inbox** (with a red circle 2) and **Replicate by Material Replication**.
- Manage Material Governance**
- Create Mass Change Request**: Sub-options include **Multi-Material Process...** and **Mass Change Multi-Material Process...**.
- Mass Change Multi-Material Process...**
- File Download**: Sub-options include **Multi-Material Process...** and **File Upload**: **Multi-Material Process...**.
- My Change Requests Monitoring**
- Display Change Requests Monitoring**
- Display Change Documents Monitoring**
- Processing Time (List) Analytics**
- Processing Time (Chart) Analytics**
- Status Report (List) Analytics**
- Data Replication**

Search Criteria section:

- Search Term:
- Material: **is** **227** (highlighted with a red circle 3)
- Industry Sector: **is**
- Description (medium text): **is**

Classification section:

- Fuzzy Search:
- Maximum Number of Results: **100**
- Save Search As:
- Buttons: **Search**, **Clear Entries**, **Reset to Default**

Result List: 1 material found

Standard	<input type="button"/> New	<input type="button"/> Copy	<input type="button"/> Mass Change	<input type="button"/> Multi-Processing	<input type="button"/> Change Document	<input type="button"/> Replication Status
<input type="checkbox"/>	Pe...	Material			Description	
<input type="checkbox"/>	227				KRP4112019	

A red circle 4 highlights the value '227' in the Material column of the result list.

>Edit Expand all Collapse all

> Change Management

Basic Data **5**

General Data

Material:	227
Base Unit of Measure:	"3 Cubic inch
Material Type:	FERT Finished Product
Industry Sector:	M Mechanical engineering
Material Group:	01 Material group 1
Old Material Number:	MAT_SS
Authorization Group:	1234
Cross-Plant Material Status:	02 Blocked for task list/BOM 12.04.2019
Batch Management:	<input checked="" type="checkbox"/> Yes
Serialization Level:	1 Keep equipment number and serial number synchronous
Approved Batch Record Required Indicator:	<input checked="" type="checkbox"/> Yes
Division:	01 Engineering

Dimension

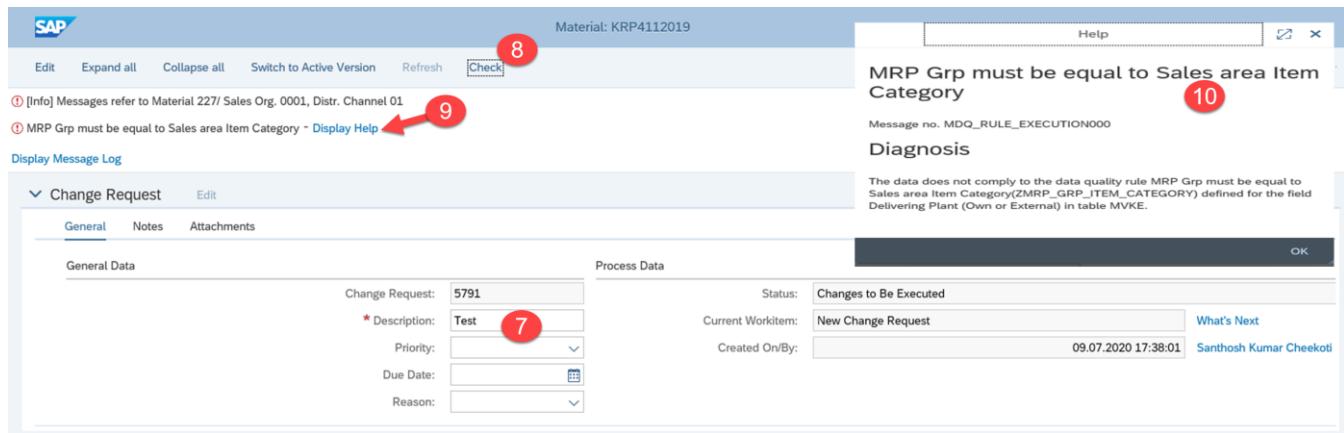
Net Weight:	10,000 KG Kilogram
Gross Weight:	10,000 KG
Length:	10,000 M Meter
Width:	10,000 M
Height:	10,000 M
Volume:	10,000 "3 Cubic inch
Size/Dimensions:	1/2

ATP

Available Change Request Types

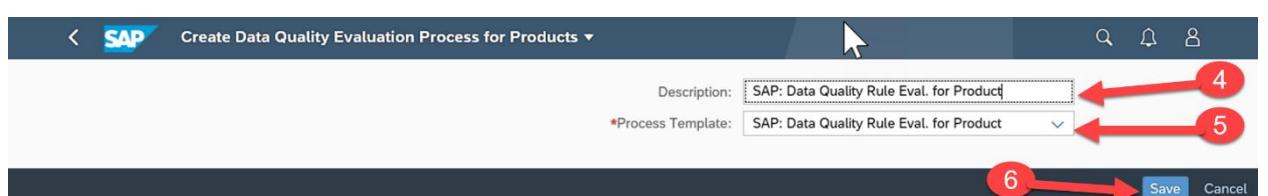
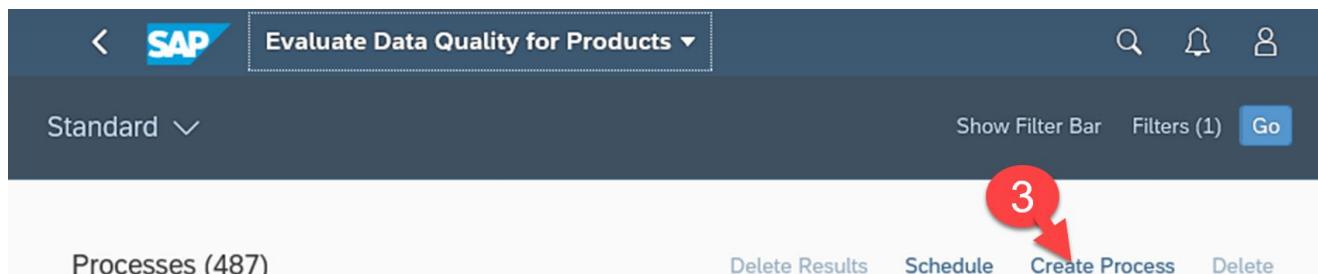
List of Available Change Request Types

Change Request Type Description
Process Material MAT02 6



Data Quality Rule Evaluation for Master Data Quality (rule stage = MDQ)

- Below are the steps to trigger Data quality Evaluation for rule stage Data quality evaluation.



SAP Data Quality Evaluation Process

Process ID: 5246

SAP: Data Quality Rule Eval. for Product

Process Template: SAP: Data Quality Rule Eval. for Product

Process Goal: Data Quality Evaluation

0 Selected Records
Saved (Not Started) 0%

Evaluation 0% Step Configuration (Evaluation)

Check Point: OFF Process Using: Master Data Quality Rule Evaluation Configuration: Evaluate with Scores Adjust

Evaluation Configuration Provide Scores for Dimensions: ON

Previous Evaluations Delete Results: ON Evaluations with Retained Results: 2 Delete Scores: ON Evaluations with Retained Scores: 20

Start Retry Rollback Save Delete Show Audit Trail

Process ID: 5246

SAP: Data Quality Rule Eval. for Product

Process Template: SAP: Data Quality Rule Eval. for Product

Process Goal: Data Quality Evaluation

1497 Selected Records
Completed 100%

Evaluation 100% Step Messages 0 Errors 0 Warnings

Results (Evaluation)

Category	OK	Not OK
Basic Data	9921	865
Description	1864	0
Dimensions	18	4
Sales Data	184	339

Evaluation Results

12.4K OK 3.4K Not OK Total: 25,806

Analyze Results

Evaluation Results for Products

Standard * ▾

Results by Outcome | K (1) Not OK 13 OK 12

Results by Product Type

Product Type	Count
Finished Product...	10K
Semifinished Pr...	1K
Production Reso...	741

Results by Cross-Plant Product Status

Status	Count
No status maint...	13,226
Blocked for task...	83
Blocked for proc...	76

9 Adapt Filters (2)

Adapt Filters

Search for Filters 🔍

Basic Show on Filter Bar

Evaluation: 5246 Filter ✓

Rule ID: ZMRP_GRP_ITEM_CATEGORY (MRP Grp must be equal to Sales) Filter ✓

Outcome: Not OK Filter ✓

Base Table: Filter ✓

Product Description: Filter ✓

Product Category: Filter ✓

Product Group: Filter ✓

Product Type: Filter ✓

Cross-Plant Product Status: Filter ✓

Article Basic Data 1

[More Filters \(3\)](#)

Article Basic Data 2

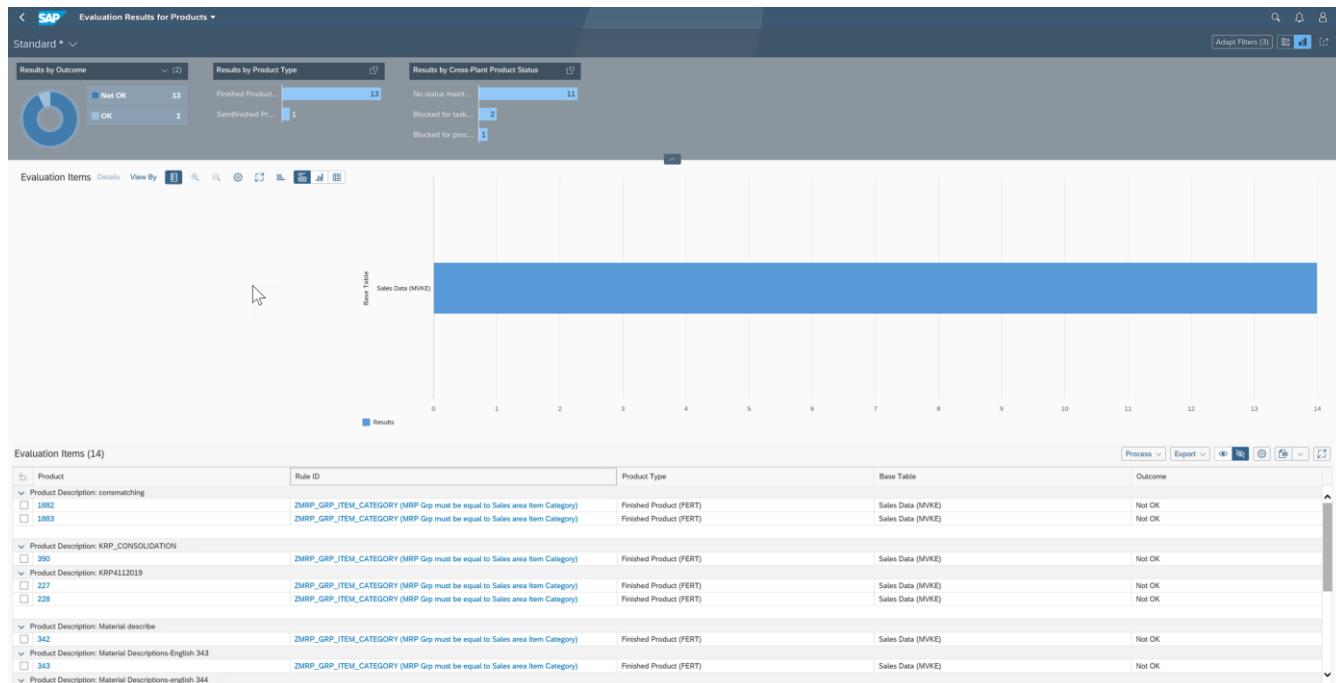
[More Filters \(1\)](#)

Go Save Restore Cancel

10

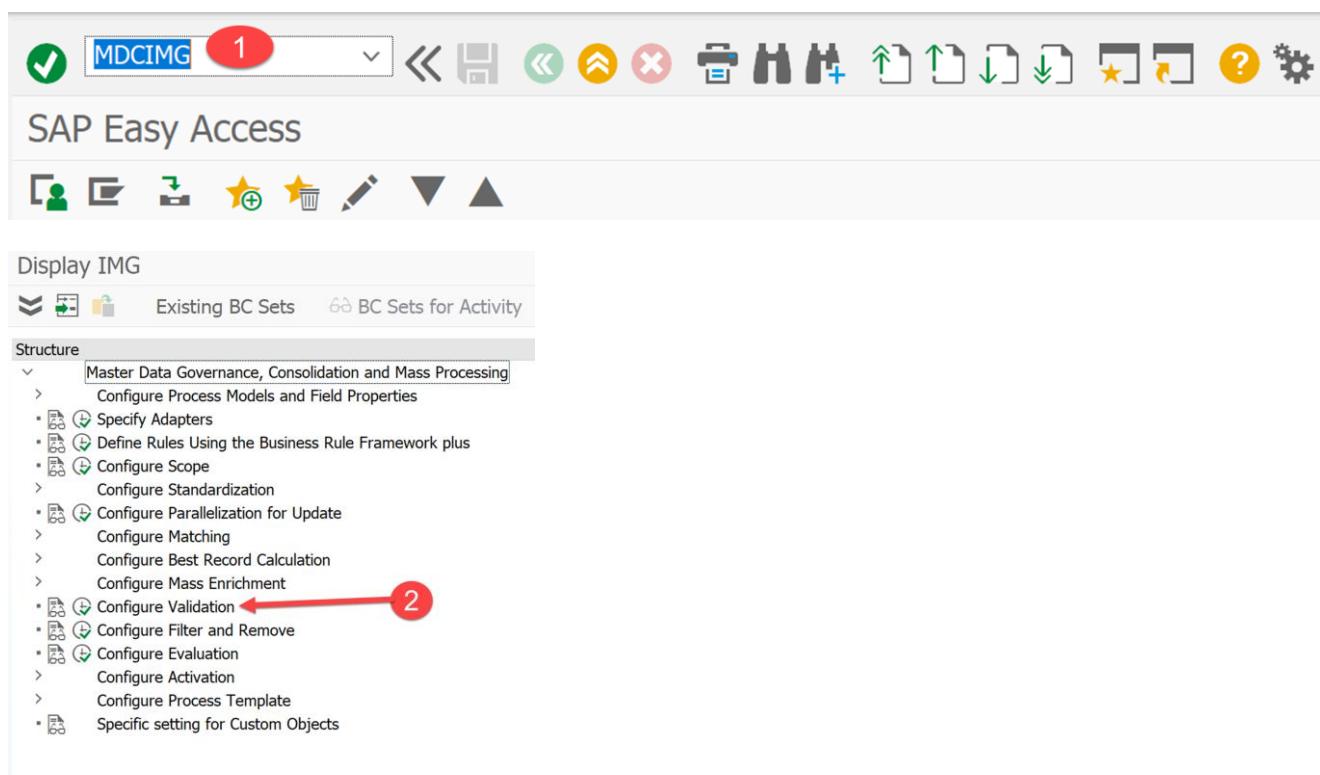
11

12



Data Quality Rule Evaluation for Mass processing (Rule Stage = MASS)

- 1) The following configuration must be done to enable DQM rules evaluation during mass processing for Validation step.



Change View "Master Data Consolidation: Configurations for Validation"



New Entries



BC Set: Change Field Values

Configuration ID

ZMG_VAL_DQ

Master Data Consolidation: Configurations for Validation

Description ZMG Test Validation with DQ Rules

No of Processes 10

Queue Prefix

Apply Data Quality Rules

MDG Checks

BRF+ Checks

Write MDQ Worklist

Remove Unchanged Rec

Threshold (%)

3

- 2) Following rules must be configured to enable DQM rule evaluation during Activation Step for Mass Processing.

Structure

- ✓ Master Data Governance, Consolidation and Mass Processing
 - > Configure Process Models and Field Properties
 - Specify Adapters
 - Define Rules Using the Business Rule Framework plus
 - Configure Scope
 - > Configure Standardization
 - Configure Parallelization for Update
 - > Configure Matching
 - > Configure Best Record Calculation
 - > Configure Mass Enrichment
 - Configure Validation
 - Configure Filter and Remove
 - Configure Evaluation
 - ✓ Configure Activation
 - Configure Activation for Business Partner
 - Configure Activation for Business Partner Relationships
 - Configure Activation for Material
 - > Configure Process Template
 - Specific setting for Custom Objects

1

2

Change View "Configurations for Activation for Material": Details

New Entries BC Set: Change Field Values

Configuration ID / Description ZDQ_ACT_MM Material Activation with DQ Rule

Configurations for Activation for Material

Number of Processes	10
Prefix for Queue Name	

New Records

Activation Target for New Records	Direct Activation	Type of Change Request	Max. Rec.
Target for New Incorrect Records	No Activation	Type of Change Request	Max. Rec.

Updated Records

Activation Target for Updated Records	Direct Activation of Best Record	Type of Change Request	Max. Rec.
Target for Updated Incorrect Records	No Activation	Type of Change Request	Max. Rec.

Match Group

Activation Target for Match Groups	Direct Activation of Best Record	Type of Change Request	Max. Rec.
Target for Incorrect Match Groups	No Activation	Type of Change Request	Max. Rec.

Replication

Call DRF after Activation

Validation

Apply Data Quality Rules

Execute Central Governance Checks (Validation Rules (BRF+) & BAdI Validations)

Execute BRFplus Checks

Retention Time

Retention Time Days Hours

3) Create Mass Processing process template with above two configurations.

Process Template ZDQ_MM_DQ1 Mass Process with DQ rule in Val and Act

Bus. Obj. Type 194 Product

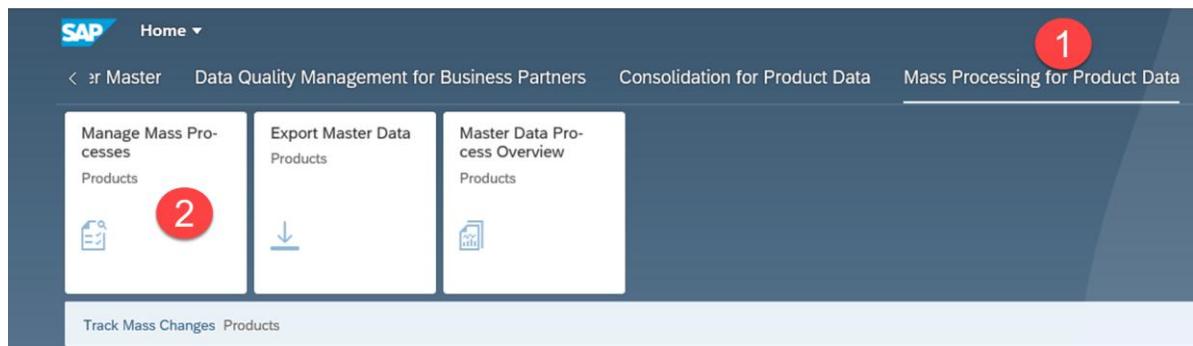
Process Template Step

Step	Step Type	Description	BO Type	Adapter	Config. ID	Check Pt.	Action Control for next step
1	Edit	✓ Edit		CL_MDC_ADAPTER_EDI		<input checked="" type="checkbox"/>	No action control
2	Validat.	✓ Validation		CL_MDC_ADAPTER_MAT_VAL	ZMG_VAL_DQ	<input checked="" type="checkbox"/>	No action control
3	Activat.	✓ Activation		CL_MDC_ADAPTER_MAT_ACT	ZDQ_ACT_MM	<input type="checkbox"/>	No action control

Process Template

Proc Tmpl	Description	BO Type	Description	Process Workflow ...	Name	Process Goal	Default Templ...	Delete Source	Strateg...
ZDQ_MM_DQ1	Mass Process with DQ rule in Val and Act	194	Product	WS54500001	MDC Workflow	Mass Processing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4) Trigger a process using the process template ZDQ_MM_DQ1



Manage Mass Processes - Products

Standard ▾

Processes (539)

Create Process Track Changes Delete

Start Mass Processing - Products

Description: **4** DQ Rule in Val and Act Step

*Process Template: **5** Mass Process with DQ rule in Val and Act

Import File: **6** Save Cancel

Mass Processing

Process ID: 5247

DQ Rule in Val and Act Step

Process Template: Mass Process with DQ rule in Val and Act

Process Goal: Mass Processing

Selected Records: **4** Saved (Not Started) 0%

Scope Selection Edit Validation Activation

Step Configuration (Scope)

Configuration: **7** Custom

Fields in Scope: **8** Material description (MAKT-MAKTX) ⊗

Mass Processing

Process ID: 5247

DQ Rule in Val and Act Step

Process Template: Mass Process with DQ rule in Val and Act

Process Goal: Mass Processing

Selected Records: **4** Saved (Not Started) 0%

Scope Selection Edit Validation Activation

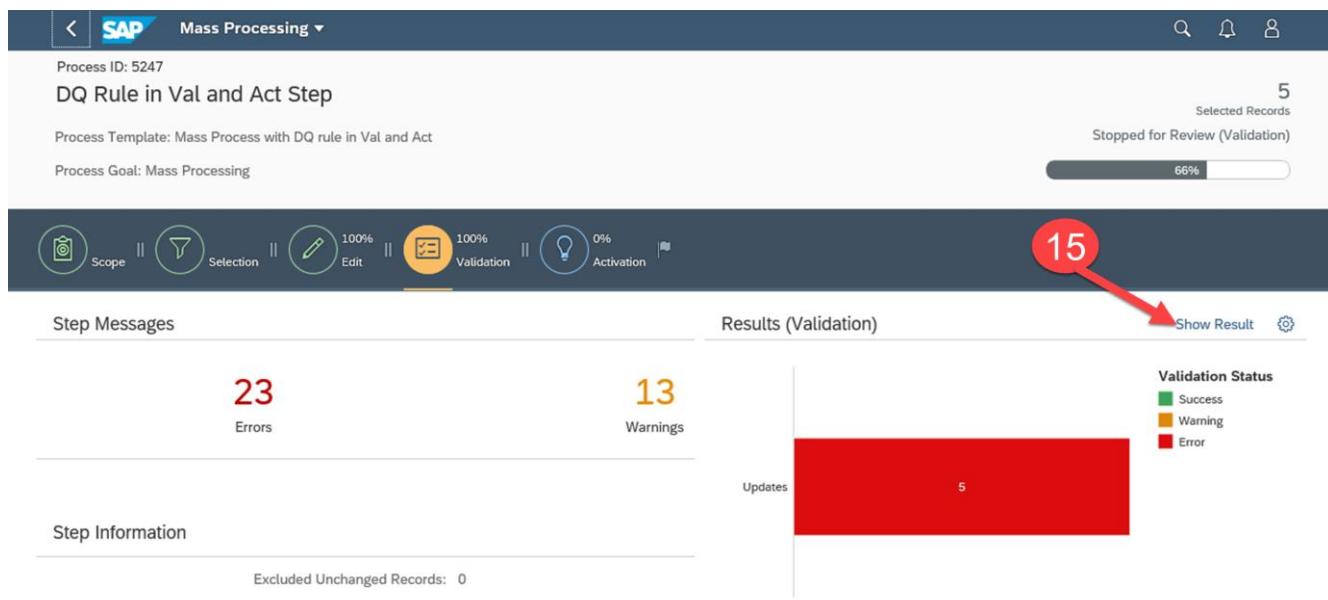
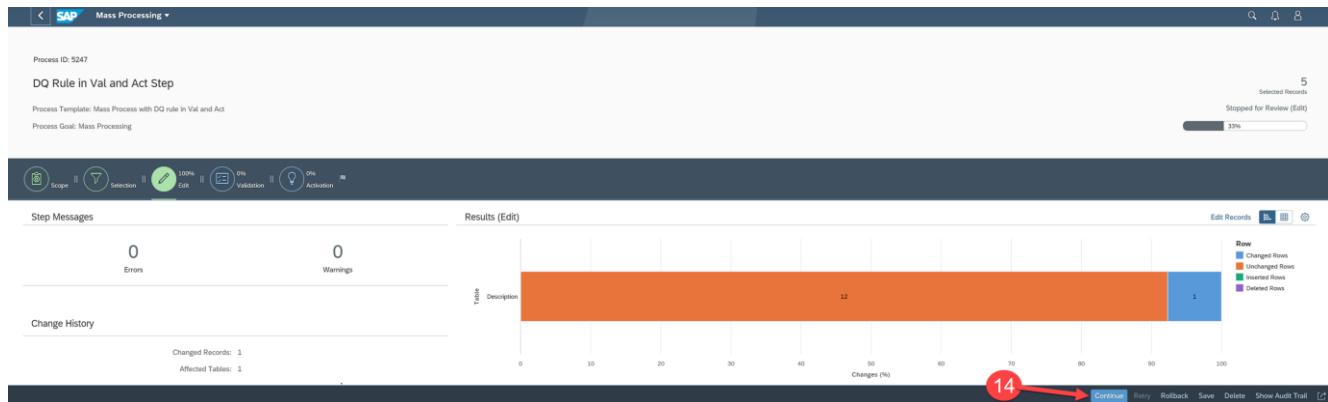
Step Configuration (Selection)

Include (3)

Material Number (MARA-MATNR) contains **10** 227
 Material Number (MARA-MATNR) equal to **11** 228
 Material Number (MARA-MATNR) equal to **12** 1855

Exclude

Start Retry Rollback Save Delete Show Audit Trail



The validations result shows the DQM rules being triggered.

Validation: Result

Standard Message Type: Log Message Class: Log Message Number: Best Record Calculation Targ.: Validation Status:

Records (5) Standard

Overview	Basic Data	Description	Class Assignment	Characteristics	Dimensions	GTIN	Sales Data	Plant Data	Tax	MRPArea	Production Version	Inspection Lot	Forecasting	Production Resources/Tools	Storage Location	Warehouse	Warehouse Storage Type	Accounting	Material Ledger General	Material Ledger Pn
5	5	13	2	8	1	3	8	6	1	1	1	1	1	1	1	1	1	1	3	
Overview	Basic Data	Description	Class Assignment	Characteristics	Dimensions	GTIN	Sales Data	Plant Data	Tax	MRPArea	Production Version	Inspection Lot	Forecasting	Production Resources/Tools	Storage Location	Warehouse	Warehouse Storage Type	Accounting	Material Ledger General	Material Ledger Pn
Product	Material Description	Material Type	Base Unit of Measure	Material Group	International Article Number															
0000000000000227	KRP4112019	FERT	'3	01	215018000000															
0000000000000228	KRP4112019	FERT	'3	01																
00000000000001855	test	FERT	EA	02																
00000000000002271	test inspec	FERT	EA																	
00000000000002272	test inspec 2	FERT	EA																	

Details

9 Messages

- FERT => DISMM = ND for Material KMQ in plant 0...
- MRP Type demo
- ZMG Rule for CMP
- ZTEST_DQR_CMP
- [Info] Messages refer to material data Plant 000U...
- Validity date of cross-plant material status is in the past
- Validity date of cross-distr-chain material status is in...
- Validity date of distr-chain-spec material status is in...