

Hands-On Experience on SAP Master Data Governance, Cloud Edition

Exercise 4: Data Quality Management

With this exercise you explore some of the features for master data quality management offered by SAP Master Data Governance, cloud edition (MDG Cloud). You will see how data quality rules for validation of master data are managed and how you can control their usage in master data processes. You will use the Evaluation Results app to analyze the results of a data quality evaluation and see how you can fix detected errors.

Estimated time: 20 minutes.

Prerequisites

You have set up the free tier plan for SAP Master Data Governance, cloud edition as outlined in the [Getting Started Guide](#).

The example data of your account is sufficient for this exercise. Further data that you created or modification of example data during previous exercises will influence the actual results that you see as part of this exercise.

Instructions

This exercise is split into 3 parts. It is required to perform each step after the other.

Step 1 – Define validation rules

Launch the app Display Validation Rules and define a new rule as described in this guide.

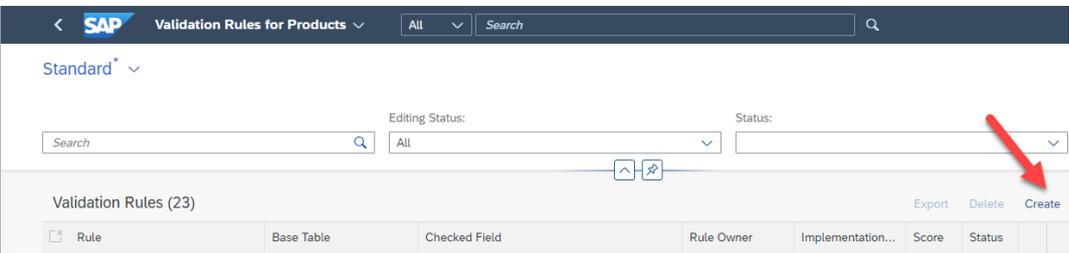
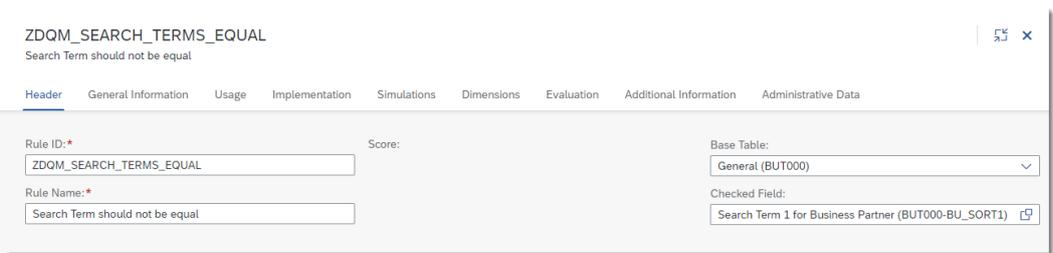
Step 2 – Analyze the evaluation results of your rule

Navigate to the evaluation results of your rule. You can either click on the score of the rule to open the app Evaluation Results with a filter applied for the rule. Alternatively, you can launch the app Evaluation Results from the home page and manually filter for the rule.

Step 3 – Correct the errors found for your rule

Either click on the business partner for which the rule evaluation results in an error, then choose Manage Business Partners – Central Governance to correct the business partner in a single request. Alternatively, you can select the erroneous business partner, plus further erroneous business partners that you might have created as part of this workshop. Having the business partners selected, you can process all of them in a mass request for fixing the errors.

Step 1: Define validation rules

| Explanation | Screenshot | | | | | | | | | | | | | | | | |
|---|--|---------------|------------|-------------------|-------------------------|-------------------|---------------------------------|-------------|------------------|--------------------------|--|--|--|--|--|--|--|
| <p>1. Launch the app <i>Validation Rules Business Partners</i> from the home page.</p> |  <p>The screenshot shows the SAP Data Quality Management for Business Partners home page. It features three main tiles: 'Validation Rules Business Partners' (highlighted with a red box), 'Schedule Data Quality Evaluation', and 'Evaluation Results Business Partners' showing a count of 781.</p> | | | | | | | | | | | | | | | | |
| <p>2. Click on Create button to create a new validation rule.</p> |  <p>The screenshot shows the SAP Validation Rules for Products list view. The 'Create' button is highlighted with a red arrow. The table below shows the structure of the validation rules.</p> <table border="1"> <thead> <tr> <th>Rule</th> <th>Base Table</th> <th>Checked Field</th> <th>Rule Owner</th> <th>Implementation...</th> <th>Score</th> <th>Status</th> <th></th> </tr> </thead> <tbody> <tr> <td><input type="checkbox"/></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table> | Rule | Base Table | Checked Field | Rule Owner | Implementation... | Score | Status | | <input type="checkbox"/> | | | | | | | |
| Rule | Base Table | Checked Field | Rule Owner | Implementation... | Score | Status | | | | | | | | | | | |
| <input type="checkbox"/> | | | | | | | | | | | | | | | | | |
| <p>3. Enter the header information of the rule as follows:</p> <p>Note: Fields Marked with red asterisk * are mandatory fields.</p> |  <p>The screenshot shows the SAP Validation Rule header information form for ZDQM_SEARCH_TERMS_EQUAL. The rule name is 'Search Term should not be equal'. The form includes fields for Rule ID, Rule Name, Base Table, and Checked Field.</p> <table border="1"> <thead> <tr> <th>Field</th> <th>Value</th> </tr> </thead> <tbody> <tr> <td>Rule ID:*</td> <td>ZDQM_SEARCH_TERMS_EQUAL</td> </tr> <tr> <td>Rule Name:*</td> <td>Search Term should not be equal</td> </tr> <tr> <td>Base Table:</td> <td>General (BUT000)</td> </tr> <tr> <td>Checked Field:</td> <td>Search Term 1 for Business Partner (BUT000-BU_SORT1)</td> </tr> </tbody> </table> | Field | Value | Rule ID:* | ZDQM_SEARCH_TERMS_EQUAL | Rule Name:* | Search Term should not be equal | Base Table: | General (BUT000) | Checked Field: | Search Term 1 for Business Partner (BUT000-BU_SORT1) | | | | | | |
| Field | Value | | | | | | | | | | | | | | | | |
| Rule ID:* | ZDQM_SEARCH_TERMS_EQUAL | | | | | | | | | | | | | | | | |
| Rule Name:* | Search Term should not be equal | | | | | | | | | | | | | | | | |
| Base Table: | General (BUT000) | | | | | | | | | | | | | | | | |
| Checked Field: | Search Term 1 for Business Partner (BUT000-BU_SORT1) | | | | | | | | | | | | | | | | |

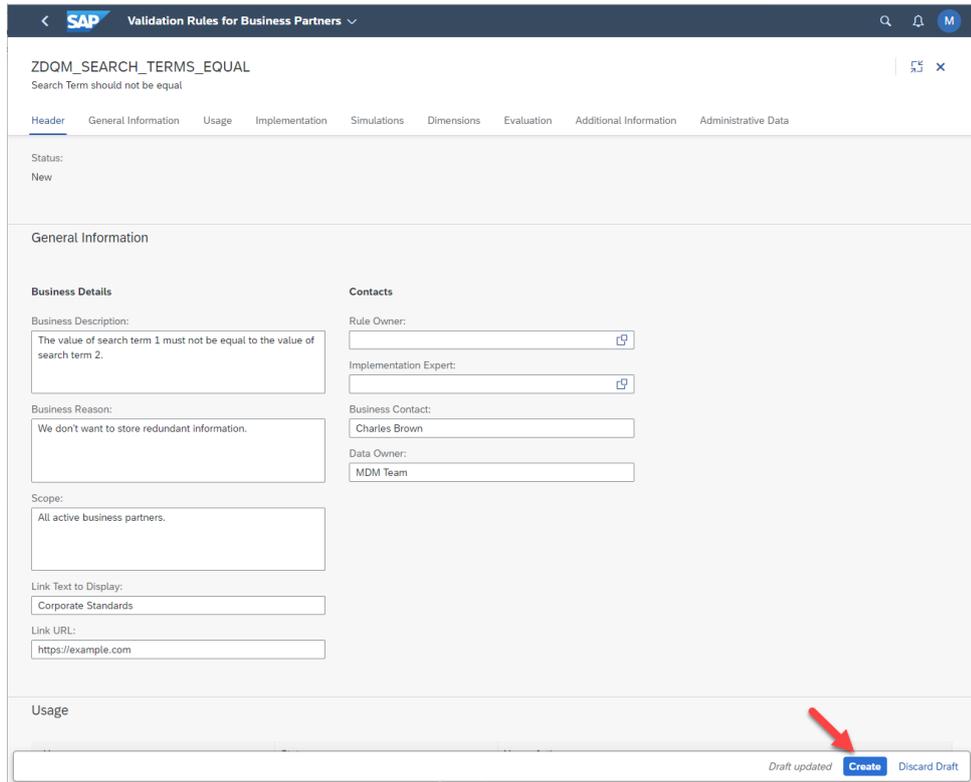
Explanation

Screenshot

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 who the rule owner is and who is the implementation expert of the rule.

After entering the information on the general information tab click on Create. Click on the Add in Usage tab.



The screenshot shows the SAP interface for creating a validation rule. The title is "Validation Rules for Business Partners" and the rule name is "ZDQM_SEARCH_TERMS_EQUAL". The status is "New". The "General Information" tab is active, showing fields for Business Description, Business Reason, Scope, Link Text to Display, Link URL, Rule Owner, Implementation Expert, Business Contact, and Data Owner. A red arrow points to the "Create" button at the bottom right of the form.

Business Description: The value of search term 1 must not be equal to the value of search term 2.

Business Reason: We don't want to store redundant information.

Scope: All active business partners.

Link Text to Display: Corporate Standards

Link URL: https://example.com

Rule Owner:

Implementation Expert:

Business Contact: Charles Brown

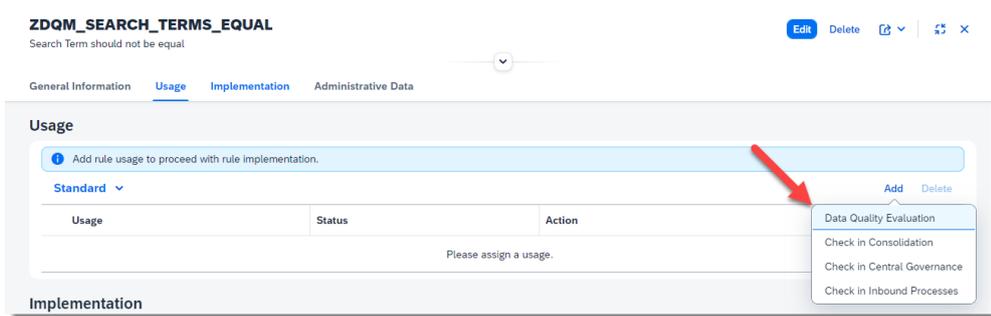
Data Owner: MDM Team

Buttons: Draft updated, **Create**, Discard Draft

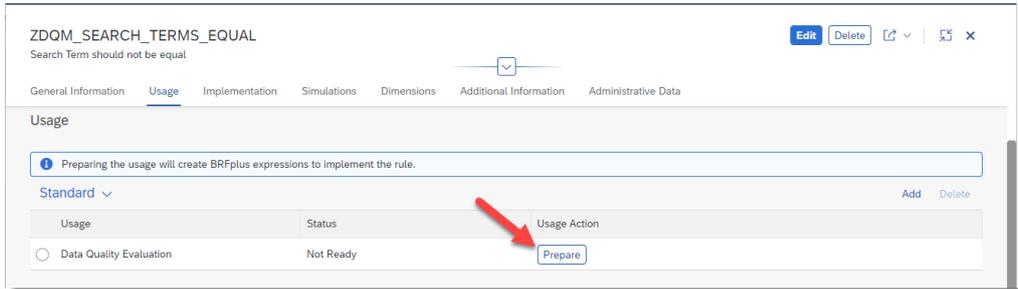
| Explanation | Screenshot |
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5. Click on *Add* in Usage tab and choose *Data Quality Evaluation* and press *Send for implementation*

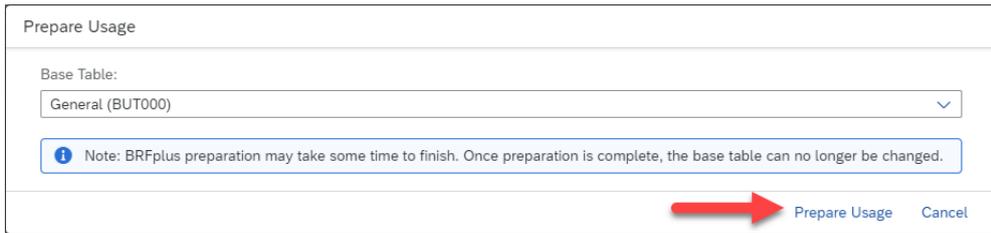
In SAP Master Data Governance, cloud edition the rule usage is supported for Data Quality Evaluation, Check in Consolidation, Check in Central Governance and Check in Inbound Processes.



6. Once the rule usage is defined, we need to prepare the rule. Press *Prepare*.



7. Press *Prepare Usage*

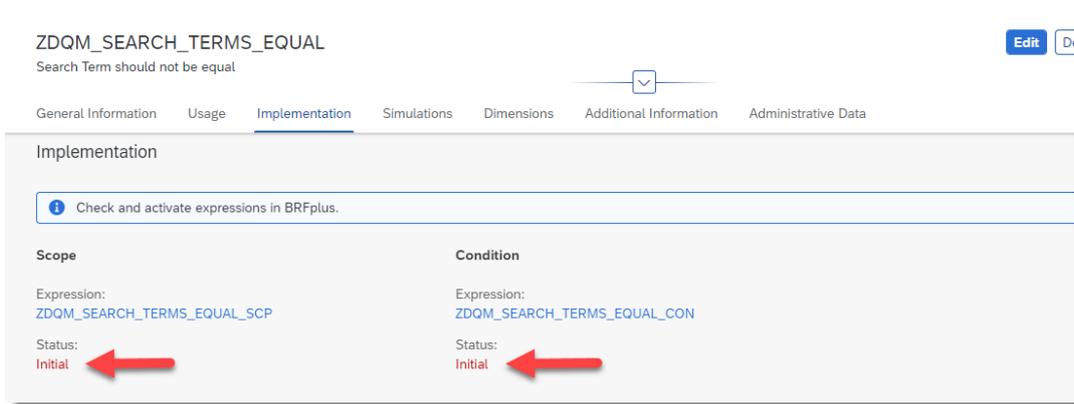


| Explanation | Screenshot |
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8. Once the preparation is complete, the BRFplus Scope expression and Condition expressions will be created and are available for rule modeling under the tab Implementation.

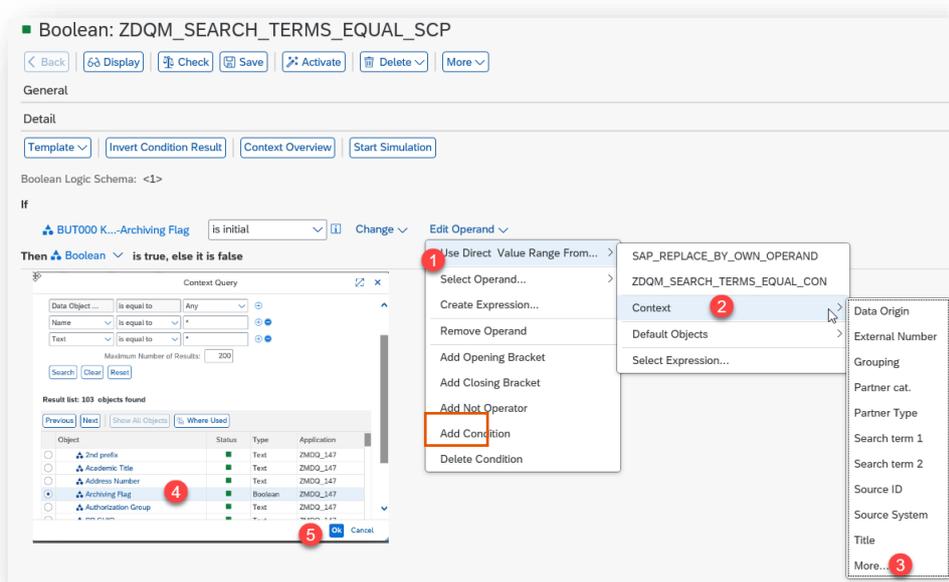
The initial status shows that rule modelling is not yet started.

Press each expression to model the rule



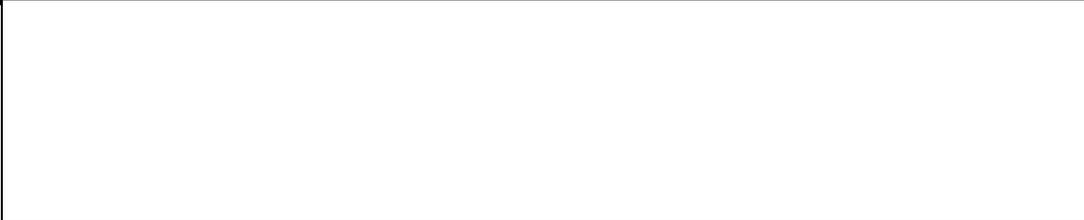
9. Press Edit and navigate as shown in the screenshot

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 condition 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



| Explanation | Screenshot |
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expression.
Below we show how to define the scope expression. Press Edit



10. With this selection criteria only active records will be checked

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

Explanation

Screenshot

12. 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.

You can directly activate the rule or start simulation to check the rule without the need to activate it before. After successful definition of the condition expression, the status of the Condition expression in the data quality rule will show Active.

The screenshot displays the SAP Simplified BRF+ Workbench interface. The main window shows the configuration for a Boolean condition named "Boolean: ZDQM_SEARCH_TERMS_EQUAL_CON". A red arrow points to the "Activate" button in the top toolbar. The condition logic is defined as follows:

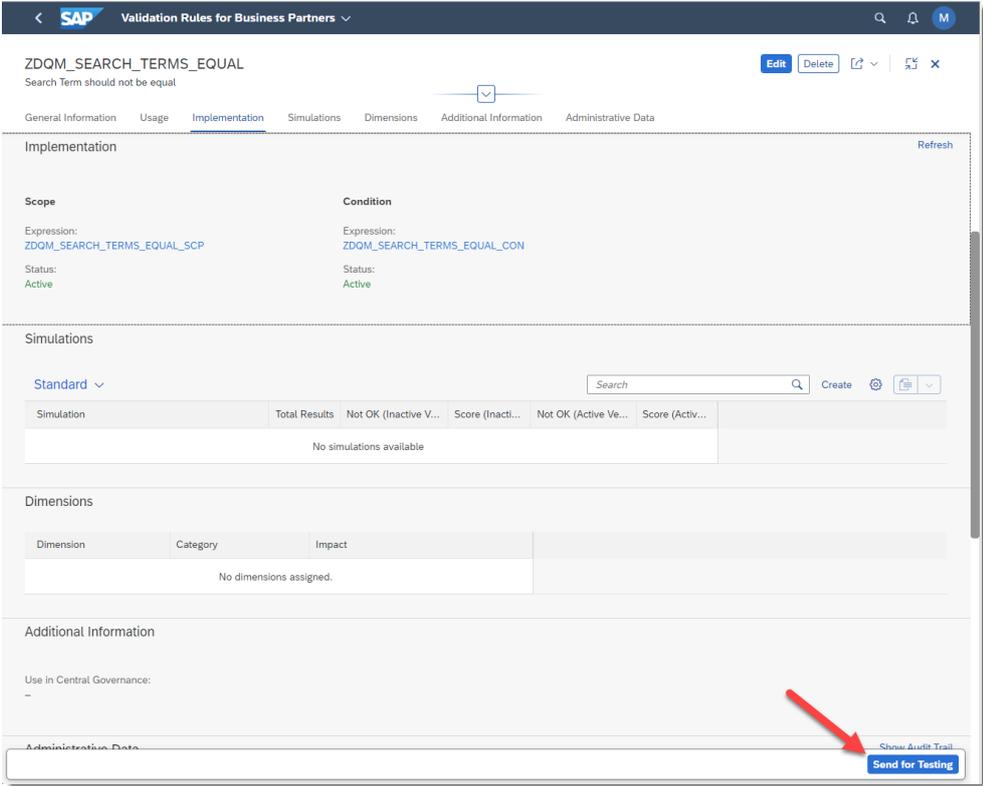
```
Boolean Logic Schema: (<1> or <2>) and <3>
If
(
  BUT000 K...-Search Term 1 is not initial
  or
  BUT000 K...-Search term 2 is not initial
)
and
BUT000 K...-Search Term 1 is not equal to BUT000 K...-Search term 2
Then Boolean is true, else it is false
```

A pop-up window titled "Condition" displays the following information:

- Expression: ZDQM_SEARCH_TERMS_EQUAL_CON
- Status: Active

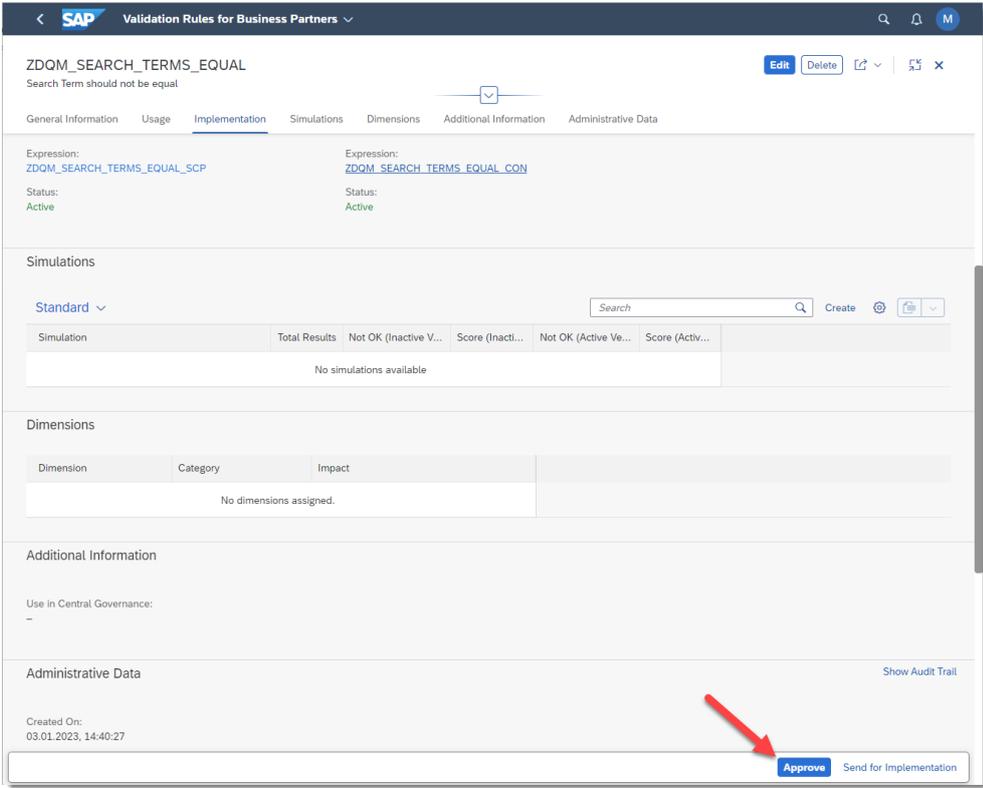
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13. After successful implementation of the rule, click on Send for Testing to send the rule for testing to rule owner.



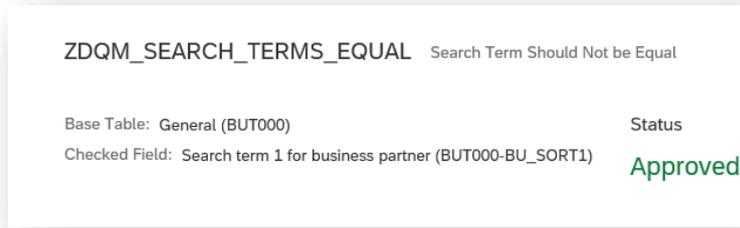
14. The rule owner should then approve the rule implementation, so that the rule usage can be enabled for data quality evaluation.

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

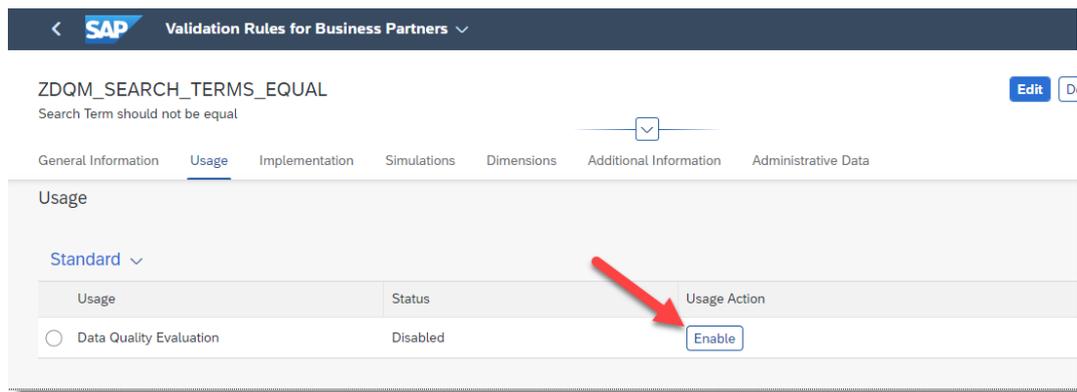


| Explanation | Screenshot |
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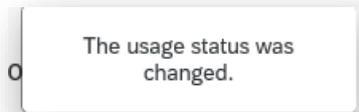
15. Once the rule owner approves the rule implementation the status of the rule will change to Approved.



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



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



The rule is now enabled for the usage in data quality evaluation.

You can finish here or make further changes by clicking 'Send for Implementation' or 'Disable' the complete rule.

18. Trigger Data Quality Evaluation by Clicking on the link Evaluate Data Quality



| Explanation | Screenshot |
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19. Click on *Create* to create Data Evaluation Process.

The screenshot shows the SAP 'Application Jobs' interface. At the top, there's a search bar and filters for 'Status' and 'Date From-To: Today -1 / +1 Days'. Below this, a toolbar contains buttons for 'Create', 'Copy', 'Details', 'Cancel', and 'Restart'. A red arrow points to the 'Create' button. Below the toolbar is a table with columns: Status, Log, Results, Steps, Job Name, Planned Start, and Created By.

20. Click on Schedule

The screenshot shows the 'New Job: Data Quality Evaluation for Business Partners' configuration screen. It has three steps: 1. Template Selection, 2. Scheduling Options, and 3. Parameters (Optional). Under '1. Template Selection', the 'Job Template' and 'Job Name' are both set to 'Data Quality Evaluation for Business Partners'. At the bottom right, a red arrow points to the 'Schedule' button.

21. Evaluation Results for Business Partners.

Note – You can click on *Process in Mass Request* to trigger a remediation process.

The screenshot shows the 'Evaluation Results for Business Partners' dashboard. It features a donut chart for 'Results by Outcome' (4 OK, 1 Not OK) and a horizontal bar chart for 'Results by Business Partner Category' (Organization: 593, Person: 420, Group: 11). Below these is a table of 'Evaluation Items (1,008)'. A red arrow points to the 'Process in Mass Request' button located above the table.

| Business Partner | Business Partner Name | Rule | Street | City | Pc |
|--------------------------|-----------------------|------------------|---|----------------|------------|
| <input type="checkbox"/> | 1005571 | Celia Conde | Search Term should not be equal (ZDQM_SEAR... | | |
| <input type="checkbox"/> | 1005572 | Aleksandra Erica | Search Term should not be equal (ZDQM_SEAR... | | |
| <input type="checkbox"/> | 1006641 | Org 1 | Search Term should not be equal (ZDQM_SEAR... | Hauptstr. | Waldorf |
| <input type="checkbox"/> | 1006642 | Uhr AG | Search Term should not be equal (ZDQM_SEAR... | Strasse | Heidelberg |
| <input type="checkbox"/> | 1006772 | James Schloss | Search Term should not be equal (ZDQM_SEAR... | Bismarckplatz | Heidelberg |
| <input type="checkbox"/> | 1006822 | DWCPA3 | Search Term should not be equal (ZDQM_SEAR... | Street | City |
| <input type="checkbox"/> | 1007477 | AGBB AG | Search Term should not be equal (ZDQM_SEAR... | Hauptstr | Ladenburg |
| <input type="checkbox"/> | 1007848 | Amed AG | Search Term should not be equal (ZDQM_SEAR... | Bahnhofstrasse | Waldorf |
| <input type="checkbox"/> | 1007897 | ADRP | Search Term should not be equal (ZDQM_SEAR... | Marktplatz | Heidelberg |
| <input type="checkbox"/> | 1008554 | Gamma | Search Term should not be equal (ZDQM_SEAR... | Bahnhofgasse | Waldorf |
| <input type="checkbox"/> | 1008555 | DWCONTACTPERSON | Search Term should not be equal (ZDQM_SEAR... | Street | City |
| <input type="checkbox"/> | 1008556 | DWCONTACTORG | Search Term should not be equal (ZDQM_SEAR... | Street | City |



Step 2: Analyze the evaluation results of your rule

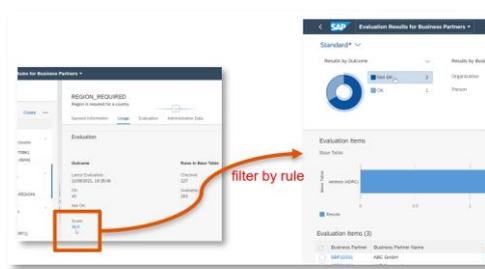
After an evaluation run you will see in the Validation Rule App that there is now a Score value. If you click on the score of the rule, you see the app Evaluation Results as depicted below. You can also open this app directly from the home page. In this case, the results are not filtered by rule, and you can see all results of the latest data quality evaluation.

The image shows three screenshots of the SAP Validation Rule App interface. The leftmost screenshot shows the 'REGION_REQUIRED' rule configuration with a 'Score' of 25.5 highlighted in a red box. An orange arrow labeled 'filter by rule' points from this score to the middle screenshot. The middle screenshot, titled 'Evaluation Results for Business Partners', shows a donut chart with 'Not OK' at 2 and 'OK' at 1. Below the chart is a 'Base Table' with a bar chart for 'Address (ADR)' and a table of 'Evaluation Items (3)'. An orange arrow labeled 'results of all rules' points from the 'Evaluation Results' link in the rightmost screenshot to the middle screenshot. The rightmost screenshot is the 'Home Page' showing a 'Display Validation Rules' button and an 'Evaluation Results Business Partners' button with a score of 6 highlighted in a red box.

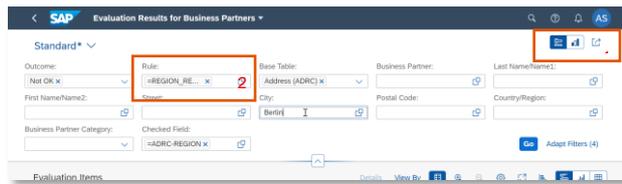
| Business Partner | Business Partner Name | Rule |
|------------------|-----------------------|--|
| SBP11031 | ABC GmbH | Region is required for a country (REGION_REQ |
| SBP21031 | XYZ Corporation | Region is required for a country (REGION_REQ |
| SBP31031 | Hugo Tester | Region is required for a country (REGION_REQ |

| Explanation | Screenshot |
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1. You can launch the app *Evaluation Results* and display the results of a special rule by clicking the score in the app *Validation Rules*

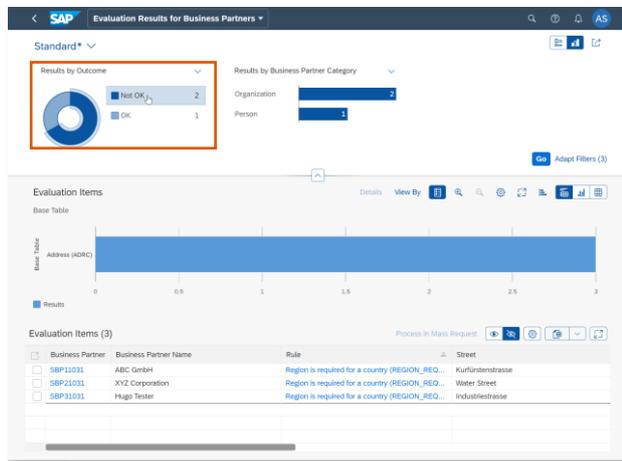


2. **Only if you launched the app from the home page:** You will see the results from all rules. You can switch the filter bar to display **compact filters** and then filter by rule.

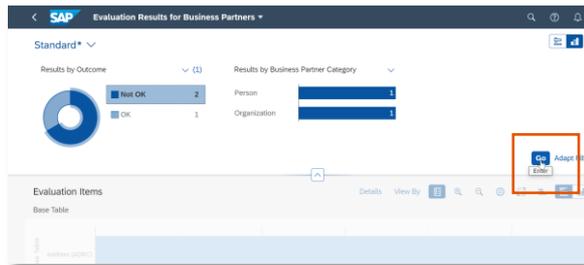


3. With the initial example data, there are 2 business partners with an error for this rule and 1 business partner that complies with the rule. You might see different results depending on how you changed the data in previous exercises.

In the visual filter bar, at the top of the screen, click on *Not OK* to display only those business partners that are erroneous according to the rule.



4. Press Go to apply the filter to the displayed evaluation items.



Explanation

- You can also use further filters. Click on the *Compact Filter* icon.

Screenshot

The screenshot shows the SAP 'Evaluation Results for Business Partners' interface. At the top right, there is a 'Compact Filter' icon (a blue square with a white 'f') which is highlighted with a red box. Below the header, there are filters for 'Results by Outcome' (Not OK: 2, OK: 1) and 'Results by Business Partner Category' (Person: 1, Organization: 1). A 'Go' button and 'Adapt Filters (4)' text are visible. The main area contains a 'Base Table' with a bar chart for 'Address (ADRC)' and a table of 'Evaluation Items (2)'. The table lists two items: SBP11031 (ABC GmbH) and SBP11031 (Hugo Tester), both with the rule 'Region is required for a country (REGION_REQ...)'. The first item is associated with 'Kurfürstenstrasse' and the second with 'Industriestrasse'.

- A selection of further filters is displayed. For example, you could use a filter on *City* to display only evaluation items for business partners with a standard address in *Berlin*.

Remark: You need to press **Go** or the **<ENTER>** key to apply the filter.

This screenshot shows the same SAP interface as the previous one, but with additional filters applied. The 'City' filter is set to 'Berlin' and the 'Rule' filter is set to '[-REGION_REQ...]', both highlighted with red boxes. The 'Go' button is also highlighted with a red box. The 'Evaluation Items' table now only displays one item: SBP11031 (ABC GmbH) with the rule 'Region is required for a country (REGION_REQ...)'. The bar chart for 'Address (ADRC)' shows a single bar for 'Kurfürstenstrasse'.

- The app updates the display according to your filter criteria.

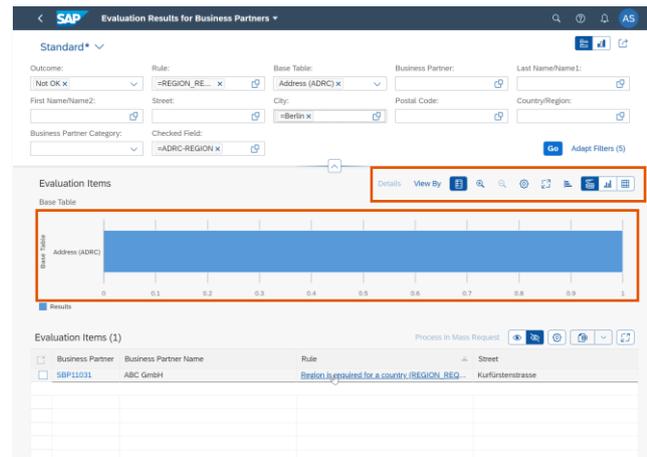
In this example only one evaluation item remains, meaning the result of the rule being applied to the business partner SBP11031.

This screenshot shows the final state of the SAP interface after applying the filters. The 'City' filter is 'Berlin' and the 'Rule' filter is '[-REGION_REQ...]', both highlighted with red boxes. The 'Go' button is also highlighted with a red box. The 'Evaluation Items' table now only displays one item: SBP11031 (ABC GmbH) with the rule 'Region is required for a country (REGION_REQ...)'. The bar chart for 'Address (ADRC)' shows a single bar for 'Kurfürstenstrasse'.

Explanation

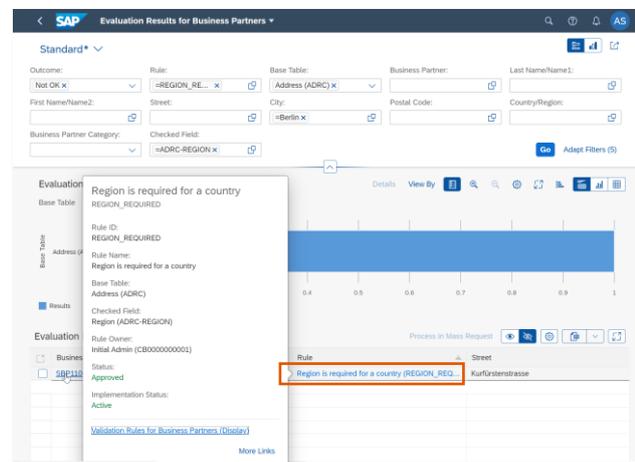
Screenshot

8. This app can be used to analyze data quality in several dimensions. It offers many features to filter interactively. You can use different charts in the middle section for visualization. Furthermore, you can use these charts to filter the evaluation items displayed in the table in the lower section of the screen. Selecting an element of a chart applies the respective values as filters.



9. This app can also be used by data owners to correct the data for which they are responsible for. In such cases, a user can choose the rule to display information on the rule.

The quick view of the rule informs you about the most important aspects of a rule when correcting data. You can also navigate to the app *Validation Rules* to display all rule information.

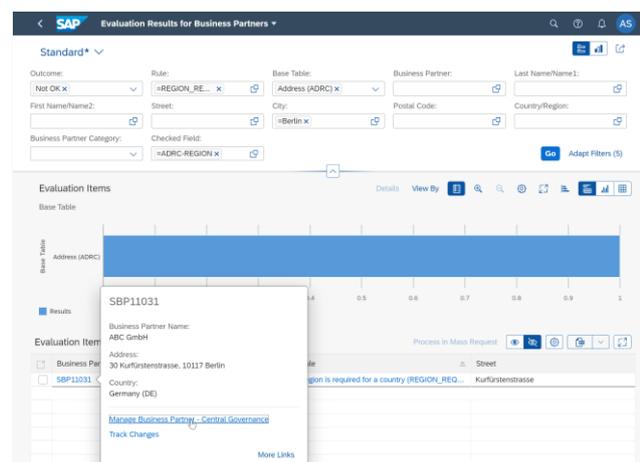


10. In case you want to see more information on the affected business partner, you can click on the respective ID.

The quick view allows you to navigate to the app *Manage Business Partners*. In this app you can correct the business partner, like you have seen in the exercise on central governance.

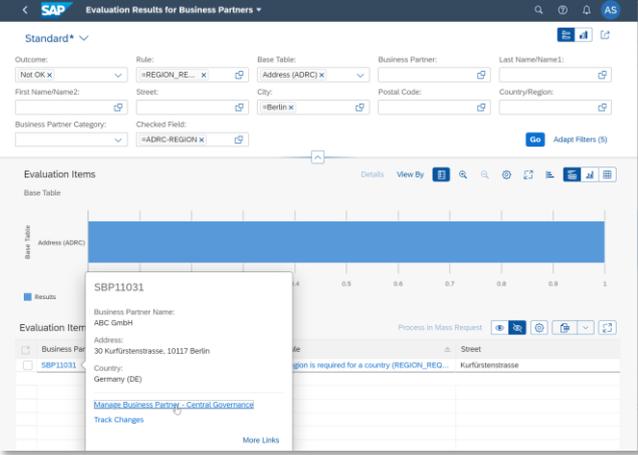
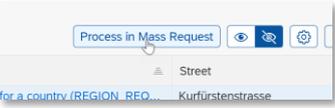
The quick view also offers you to navigate to other apps for which you are authorized.

The next part of this exercise shows you how to correct data.



Step 3: Correct the errors found

In the previous step you have found all erroneous business partners that do not comply with the rule you have created, and you filtered for the business partners that are in your interest. In this part, you correct these business partners.

| Explanation | Screenshot |
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| <p>1. The previous part ended with displaying a selection of business partners that are erroneous.</p> <p>In case you want to see more information on an affected business partner, you can click on the respective ID.</p> <p>The quick view allows you to navigate to the app <i>Manage Business Partners</i>. In this app you can correct the business partner, like you have seen in the exercise on central governance.</p> <p>Since you have seen this already, we will not follow this path in this exercise.</p> |  <p>The screenshot shows the 'Evaluation Results for Business Partners' interface. At the top, there are filters for Outcome (Not OK), Rule (REGION_RE...), Base Table (Address (ADRC)), Business Partner, and Last Name/Name1. Below the filters, there is a 'Business Partner Category' dropdown and a 'Checked Field' dropdown (ADRC-REGION). A 'Go' button and 'Adapt Filters (3)' are visible. The main area shows 'Evaluation Items' with a progress bar. A quick view for 'SBP11031' is open, displaying 'Business Partner Name: ABC GmbH', 'Address: 30 Kurfürstenstrasse, 10117 Berlin', and 'Country: Germany (DE)'. It also shows a rule: 'Region is required for a country (REGION_REQ... Kurfürstenstrasse' and a 'Street' field. There are links for 'Manage Business Partner - Central Governance' and 'Track Changes'.</p> |
| <p>2. Alternatively, and in case you want to correct multiple business partners in a mass process, proceed as follows:</p> <p>Select all relevant evaluation items.</p> <p>Note that you can also perform these steps if there is only one evaluation item left in your particular case.</p> |  <p>The screenshot shows the 'Evaluation Results for Business Partners' interface. The 'Evaluation Items (2)' section is visible, showing two items: 'SBP11031 ABC GmbH' and 'SBP31031 Hugo Tester'. Both items have a rule: 'Region is required for a country (REGION_REQ... Kurfürstenstrasse' and a 'Street' field. The 'Process in Mass Request' button is highlighted.</p> |
| <p>3. Then press <i>Process in Mass Request</i>.</p> |  <p>The screenshot shows a close-up of the 'Process in Mass Request' button, which is highlighted. Below it, the rule text 'Region is required for a country (REGION_REQ... Kurfürstenstrasse' and the 'Street' field are visible.</p> |

Congratulations. You have completed the exercises. www.sap.com.