Implementing Business Rules in SAP SuccessFactors

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Use Cases for Configuring Business Rules

Business rules are configured, for example, to set default values, conditional values, or field properties, or to display error messages.

You can set up business rules to do the following:

- **Set default values**

  You can define default values for specific fields.

  Example: The start date field that needs to be maintained by the user is automatically set to the current date.

- **Set conditional values**

  You can define which default value is set when a specific condition is met: If this condition is met, then this is how the system should react.

  Example: When the admin selects the business unit **ENG**, the job classification is automatically set to **Engineering**.

- **Set field properties**

  You can dynamically default a field as visible or required.

  Example: If the company is **COMP_USA**, the phone extension is always required.

  > **i Note**
  > However, hiding all fields in a card using a business rule isn't supported and potentially causes unexpected behavior in the system. You must have at least one field on this object enabled to avoid inconsistent behavior.

- **Display error messages**

  You can define that an error message is displayed.

  Example: The user forgot to maintain a required field and gets a customer-specific error message displayed when trying to save.

- **Calculate transient fields**

  You can define transient fields that are calculated "on the fly" when the user opens a page. The calculated values aren't meant to be written to the database, as they aren't fixed values.

  Example: The user can see the employee's current age in the system.

- **Validate consistency of fields**

  You can define that all relevant fields are provided.

  Example: If an admin selects a **Contract Type** with fixed term validity, the **Contract End Date** needs to be provided. This is automatically checked.

- **Trigger events**

  You can define that certain actions in the system trigger an event to the corresponding application.

  Example: When the start date or hiring manager of a new hire changes, the onboarding process is restarted automatically.

Creating Business Rules

Create business rules to configure system behavior.

Prerequisites

- You've enabled **Enable Generic Objects** in Provisioning.

  > → **Remember**
  >
  > As a customer, you don't have access to Provisioning. To complete tasks in Provisioning, contact your implementation partner or Account Executive. For any non-implementation tasks, contact Technical Support.

- You've assigned the corresponding permissions under **Administrator Permissions** ▸ **Metadata Framework**.

  For more information, please refer to Introduction to Using RBP.

- You've set up the application for which you want to create business rules as described in the application-specific documentation.

  > i **Note**
  >
  > Each application might use business rules in a different way, so make sure you understand the application-specific aspects as described in the application-specific documentation.

Procedure

1. Go to **Admin Center** ▸ **Configure Business Rules**.

   You get to the **Business Rules Admin** page.

2. Choose □ *(Create New Rule)*.

3. Select a scenario suitable for the business rule you want to create.

   In the top-right corner, the system displays user entry fields for required information about the rule you want to create.

4. Make the required entries for the rule and choose **Continue**.

   You get to the **Configure Business Rules** page.

5. **Optional:** Add variables in the **Variables** section.

6. Create conditions in the **If** section.

   > i **Note**
   >
   > Move the cursor to the upper right corner of the **If** section and select **Always True** if the rule is to be triggered when any change is made to the object or entity the rule is assigned to.

7. Create statements in the **Then** section to define how the system reacts when the conditions are met.

   > i **Note**
   >
   > Some rule scenarios don't require a Then statement if the application has already defined the system's reaction.
   >
   > For more information, please refer to the application-specific documentation.

8. **Optional:** Add Else If conditions if you want to combine several conditions in the same rule.

   > → **Tip**
   >
   > You can copy and paste the If conditions to the Else If conditions if they share similar expressions.

9. **Optional:** Add Else statements to define how the system reacts when none of the conditions are true.

   → **Tip**

   You can copy and paste the Then statements to the Else statements if they share similar expressions.

10. Save the rule.

Next Steps

To make the rule effective, you must assign it to the corresponding target object or entity.

Related Information

Creating Conditions

Creating Statements

Assigning Business Rules

Creating Variables

Creating Conditions

Define which conditions have to be met in the If or Else If section of the business rule so that the system executes the actions defined in the Then statement.

Prerequisites

You've created a business rule and are on the **Configure Business Rules** page in edit mode.

Context

In some cases, you want the statements of a rule to be executed when any change is made to the object or entity the rule is assigned to. To achieve this behavior, you set the conditions to **Always True**.

You can use this option, for example, to default values or set field properties that are displayed to the user as soon as the user opens a page. If you can use this option at all is defined by the rule scenario you've chosen.

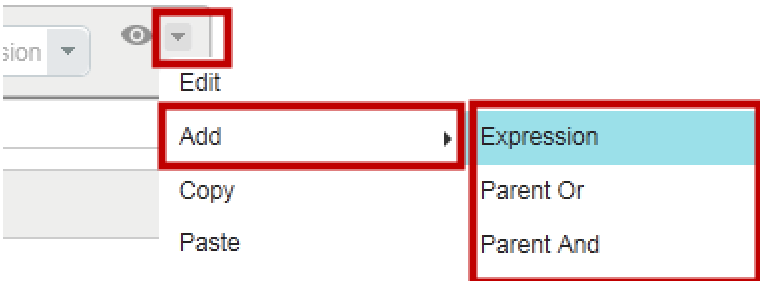
Procedure

1. On the **Configure Business Rules** page, go to the **If** section of the rule and choose one of the following options:
   - To define that the statements of the rule are executed when any change is made to the object, field, or entity the rule is assigned to, move the cursor to the upper right corner of the **If** section and select **Always True**.

     With **Always True** selected, no more input is required in the **If** section and you can proceed to create the **Then** statement.
   - To create conditions, open the dropdown list of the left expression and choose the corresponding value.
2. Compare the left and right expression by selecting the corresponding comparison operator.

   For example, **is equal to**.
3. Select the corresponding right expression.
4. **Optional:** To add additional If conditions, open the dropdown menu of the If condition, select **Add**, and select the corresponding logical operator, which connects the If conditions.

For example, you can add a parent If condition that connects with an And logical operator.



→ **Tip**

From the dropdown menu, you can also copy and paste the If conditions to another If condition if they share similar expressions.

5. **Optional:** To move the position of conditions you've already created, open the dropdown menu of the corresponding If condition and select **Move**.
6. **Optional:** To add Else If conditions that are considered if the If conditions you've defined so far aren't met, select **Add Else If** at the bottom of the rule.

   Else If conditions allow you to combine several conditions in the same rule. Only the Then statements following the first If condition that is true are executed. All other Then statements are skipped.

Next Steps

1. If applicable, proceed with defining the Then statement for your business rule.
2. Assign the business rule to the corresponding object or entity.

Related Information

Comparing Values Using Left and Right Expressions

Creating More Complex Rules Using Rule Functions

Collection Filters

Comparison Operators

Creating Variables

Simplify business rules by storing calculation results of complex and repeating tasks in variables.

Prerequisites

You've created a business rule and are on the **Configure Business Rules** page in edit mode.

Context

The **Variables** section of a business rule serves as a processing block before the first **If/Else If/Then/Else** section in which it is first used. You can store calculation results of complex or repeating tasks in variables and call them in the If/Else If/Then/Else sections of the rule. In doing so, you can simplify the rule definition and improve the performance of rule executions. You can define any number of variables.

Procedure

1. On the Configure Business Rules page, choose the Variables section, and choose Add Variable.
2. Enter the name of the variable. The name starts with the prefix "var_" and can contain only alphanumeric characters and underscores.
3. In the Select Expression field, define the complex or repeating tasks using expressions. You can choose the eye icon to switch to view mode.

Results

You can now use the variable in the If conditions and Then statements by selecting it from the dropdown list of the corresponding field where you want to use it.

i Note

You can use variables as a read-only element in the rule definition. You can't create, edit, or delete values of variables.

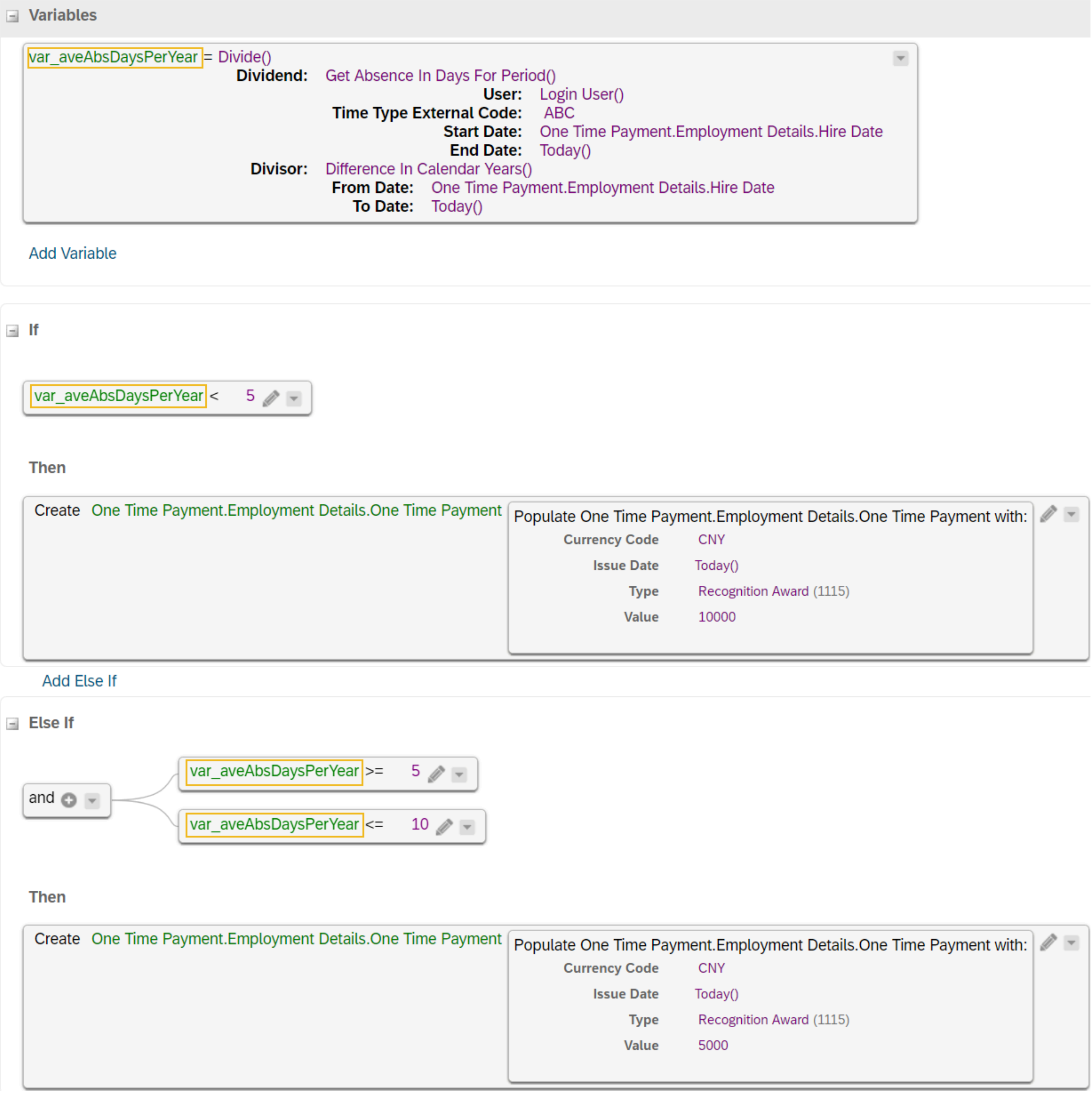
Example

You want to calculate the average annual absence days of employees and use this number to determine the amount of payment given to them as service awards. Instead of defining a rule that calculates the average absence days in each If condition, you can create a variable before the rule definition and use it in each If condition.

In the Variables section, you select the Divide() function and make the following entries:

Input Parameter	User Entry	Input Parameter	User Entry
Dividend	Get Absence in Days For Period()	User	Login User()
		Time Type External Code	ABC
		Start Date	One Time Payment.Employment Details.Hire Date
		End Date	Today()
Divisor	Difference in Calendar Years()	From Date	One Time Payment.Employment Details.Hire Date
		To Date	Today()

In the If section, you define that if the variable returns a result smaller than 5, then a one-time payment of type Recognition Award is created. Here's an example of what this rule could look like in the system:



Variables

var_aveAbsDaysPerYear = Divide()
Dividend: Get Absence In Days For Period()
User: Login User()
Time Type External Code: ABC
Start Date: One Time Payment.Employment Details.Hire Date
End Date: Today()
Divisor: Difference In Calendar Years()
From Date: One Time Payment.Employment Details.Hire Date
To Date: Today()

If

var_aveAbsDaysPerYear < 5

Then

Create One Time Payment.Employment Details.One Time Payment
Populate One Time Payment.Employment Details.One Time Payment with:

Currency Code	CNY
Issue Date	Today()
Type	Recognition Award (1115)
Value	10000

Else If

and
var_aveAbsDaysPerYear >= 5
var_aveAbsDaysPerYear <= 10

Then

Create One Time Payment.Employment Details.One Time Payment
Populate One Time Payment.Employment Details.One Time Payment with:

Currency Code	CNY
Issue Date	Today()
Type	Recognition Award (1115)
Value	5000

Creation of a Rule That Raises a Message

A rule that raises a message when the rule is triggered is defined in a two-step process.

A typical use case for creating such rules is to validate the user's entries. For example, you could create a rule that displays an error message when the person's age is less than 18.

To create such a rule, you first create the message text, and then create a rule that refers to the message text you've created.

1. Creating a Message Text

   Create the message text to be displayed when a rule is triggered by creating a Message Definition object.

2. Creating a Message Rule

   Define a rule that displays a message when it’s triggered.

Creating a Message Text

Create the message text to be displayed when a rule is triggered by creating a Message Definition object.

Context

The Message Definition object is a Metadata Framework object that contains the message text.

i Note

You can't expose the Message Definition object to APIs.

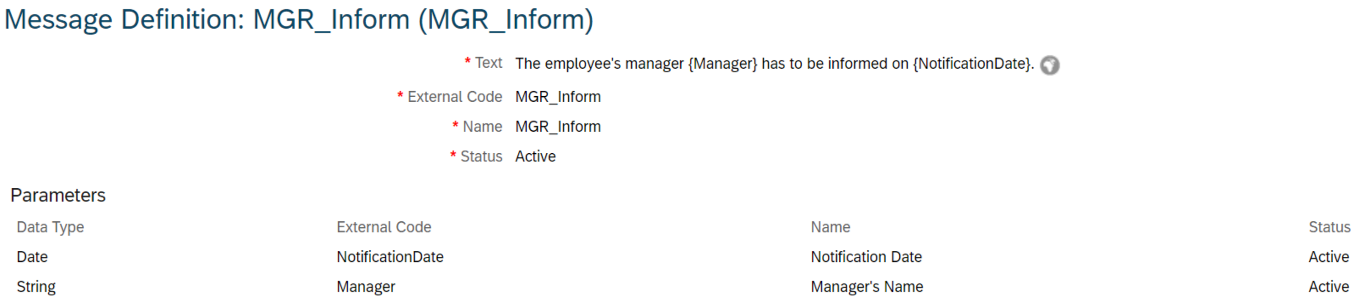
Procedure

1. Go to **Admin Center** > **Manage Data**.
2. In the **Create New** field, select **Message Definition**.
3. In the **Text** field, enter the message text that you want to be displayed to the user. If you use parameters in the message text, place the external code of the parameters you're going to define in step 6 inside braces.

   ### i Note

   Parameters are like placeholders that are filled with dynamic values when the message is called up.

   This Message Definition object contains the message text "The employee's manager {Manager} has to be informed on {NotificationDate}", where the corresponding manager's name and the date are filled during runtime.

   Message Definition: MGR_Inform (MGR_Inform)

   * Text The employee's manager {Manager} has to be informed on {NotificationDate}.

   * External Code MGR_Inform

   * Name MGR_Inform

   * Status Active

   Parameters

Data Type	External Code	Name	Status
Date	NotificationDate	Notification Date	Active
String	Manager	Manager's Name	Active

4. Enter an external code for the Message Definition object.
5. Enter a name for the Message Definition object.
6. If you've used parameters in the message text in step 3, define their properties under **Parameters**.

   ### i Note

   In this step, you only define what type of parameters you want to use in this message (for example: Date as data type).

   The concrete parameters are defined when you assign the message to the rule (for example: Position Entry Date).

7. Save the message.

[Parameter Definition for Message Definition Objects](#)

If you use parameters in the message text of a Message Definition object, you need to define their properties on the **Manage Data** page.

Task overview: Creation of a Rule That Raises a Message

Next task: Creating a Message Rule

Creating a Message Rule

Define a rule that displays a message when it’s triggered.

Prerequisites

You've created a Message Definition object that contains the message text to be displayed.

Procedure

1. Go to ▶Admin Center ▸ Configure Business Rules ▸.

   You get to the **Business Rules Admin** page.

2. Choose □ *(Create New Rule).*

3. Select a scenario suitable for the business rule you want to create.

   In the top-right corner, the system displays user entry fields for required information about the rule you want to create.

4. Make the required entries for the rule and choose **Continue**.

   You get to the **Configure Business Rules** page.

5. Enter the conditions that cause the error message to pop up in the If conditions.

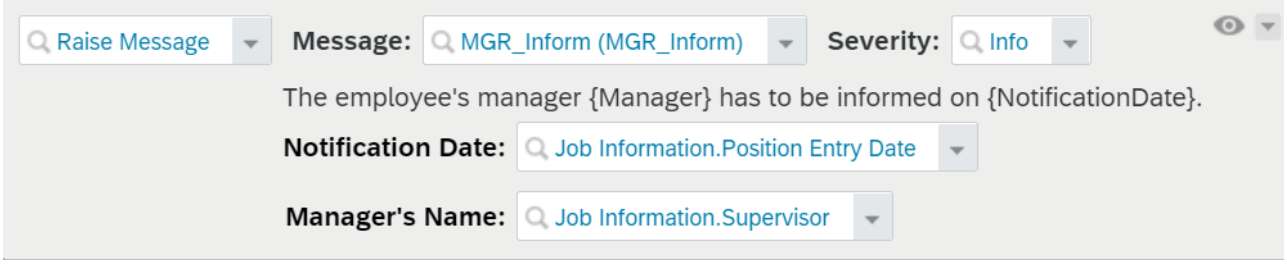
6. Define the Then statement where you refer to the message. Select the following:

   a. In the **Select Action** field, select **Raise Message**.

   b. As **Message**, select the Message Definition object that you've created before.

   c. If you've defined parameters for the message when you created the Message Definition object, enter or select the concrete parameters that you want to be used in this rule.

   Here's an example, where the date is the position entry date, and the manager is derived from the Supervisor object field. The message text has been defined as "The employee's manager {Manager} has to be informed on {NotificationDate}."



Raise Message **Message:** MGR_Inform (MGR_Inform) **Severity:** Info

The employee's manager {Manager} has to be informed on {NotificationDate}.

Notification Date: Job Information.Position Entry Date

Manager's Name: Job Information.Supervisor

   d. As **Severity**, select whether the message is an error, warning, or info message.

   ### i Note

   You can define that messages with several severities are raised simultaneously for the same object. However, if you do this, only one dialog is shown containing all the messages, and the strictest severity is used to determine the dialog type. For example, if there’s one **Info** and one **Warning** message raised at the same time, the message is shown as a **Warning** dialog box, containing both messages.

7. Save the rule.

i Note

When you save the rule, an association to the used message definition is added to the rule. With that, the associated message definition is considered when the rule is exported as well as in case the rule is added to a transport bundle and transported using the Configuration Transport Center.

Next Steps

Assign the rule to the corresponding object or entity.

i **Note**

Once a message definition is used in a business rule, it is no longer possible to delete the message definition, or to change the external code of the message definition.

If you want to do either of those things, you first need to remove the message definition from any business rules.

Message Severity

The severity defines whether a message is an error, warning, or info message.

Task overview: Creation of a Rule That Raises a Message

Previous task: Creating a Message Text