Uptempo

Job Manager

Synchronization of Jobs with Planning Elements

Version 7.2 and later

For Internal Use Only

EN

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Contents

1 Introduction

This document describes the synchronization between jobs in the *Job Manager* module and planning elements in the *Marketing Planner* module. The target group of this document are exclusively Uptempo employees, especially consultants who configure a customer system.

1.1 Use Case

The synchronization described in this document enables a job or a process to create a new planning element in the Marketing Planner in a defined workflow step and to fill it with data or to keep it synchronized. The planning element is created fully automatically. The position in the element tree results from the data stored in the job/process.

This feature is suitable for use cases in which the unit represented by a planning element in the Marketing Planner, for example a campaign, is the result of a job/process in the Job Manager.

The document distinguishes between two main paths: The synchronization of a job with a classical workflow (see chapter 2, page 6) or process with a BPMN workflow (see chapter 3, page 18). Use jobs with classic workflow if you need bidirectional synchronization.

2 Configuration for Jobs

This chapter describes the configuration settings you need to make for the synchronization feature with jobs. The following sub-steps are involved in detail:

- Set an event to trigger synchronization, see chapter 2.1
- Specify whether planning element is deleted when job is finished or deleted, see chapter 2.1
- Configure *config* tab for linkage fields, see chapter 2.2
- Configure fields for the position in the element tree, see chapter 2.3
- Link planning element fields with job variables, see chapter 2.4
- Check configuration, see chapter 2.6

Please also pay attention to the notes in chapter 2.5.

2.1 Combination of Workflow and Job Type

The command *Assign workflows* has been removed from DSE-Admin and has moved into the UI of the job type. The combination of job type and workflow is defined in the *Workflows tab of an opened type*. At this point, you make the following specifications for the synchronization feature:

- Set event to trigger synchronization
- Specify whether planning element is deleted when job is finished or deleted

You can define the following events for synchronization for each workflow step:

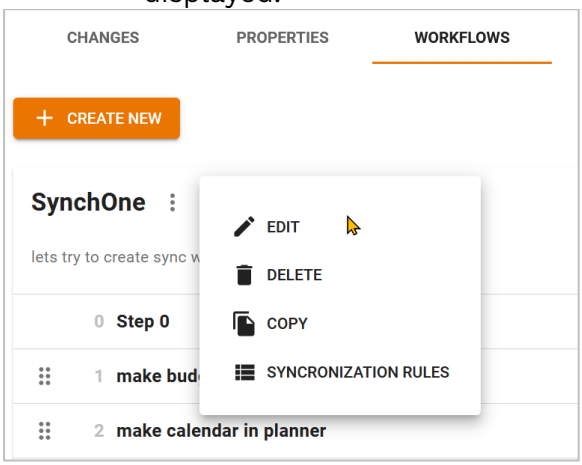
- When the form is saved
- When the workflow step is reached
- For both events

You also define whether the planning element is deleted if the job is terminated or deleted.

Set trigger event and specify whether planning element is deleted when job is finished or deleted

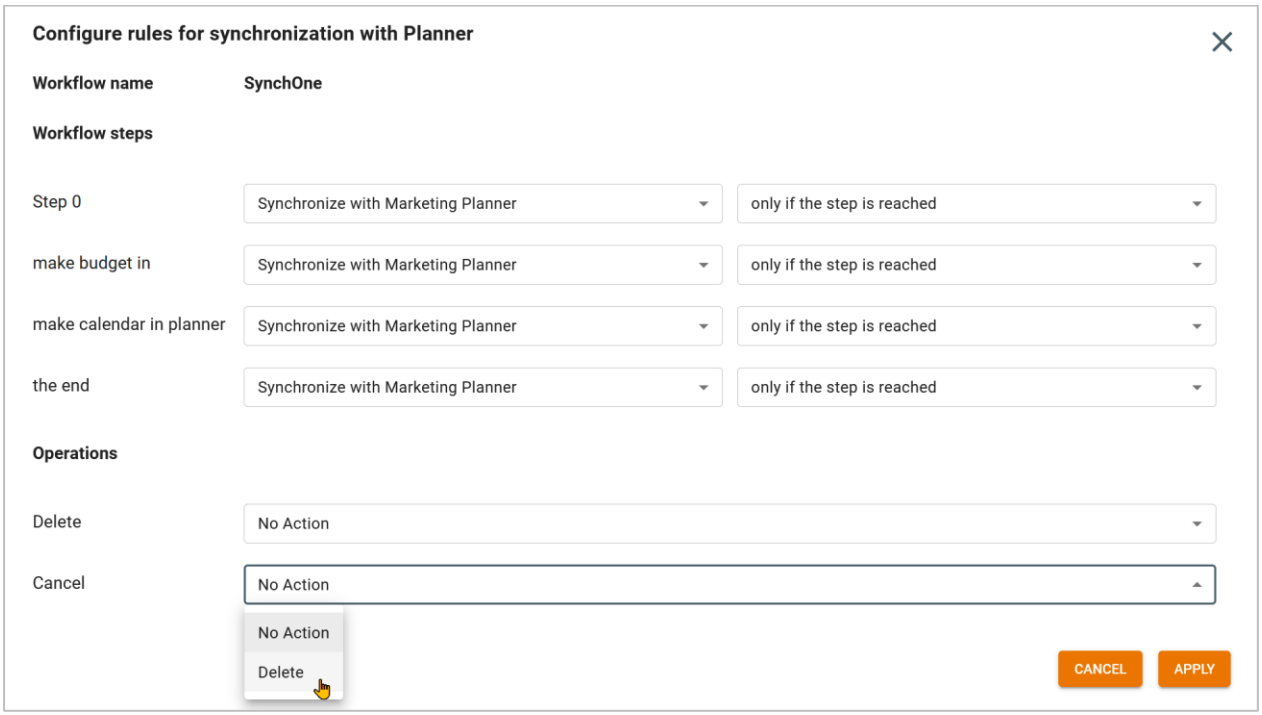
1. Click *> Administration > Datasheet Engine > Types - New*
2. Find the job type whose combination with a workflow you want to edit.
3. In the row of the job type, click the icon .
4. Click the tab *Workflows*.

5. A list of assigned workflows and a button for creating new workflows are displayed.



6. If the desired workflow is still missing, add it now.
7. Click the symbol ⋮ behind the name of the job type you want to edit for synchronization.
8. A menu opens.
9. Select Synchronization Rules

The dialog *Configure rules for synchronization with Planner* opens.



10. In the *Workflow steps* area, define for each step whether synchronization takes place:
    - *No action*: No synchronization of the element in Marketing Planner

- *Synchronize with Marketing Planner*: In workflow steps where this selection is set, the data in Marketing Planner is updated when the job is saved.

11. In the Operations section, define what happens when the job is deleted and canceled.
    - *No action*: The planning element remains unchanged.
    - *Delete*: The planning element is deleted.
12. Click *Apply*.

The settings are saved.

13. Click *Cancel* or × to close.

The dialog is closed. You have specified the trigger event and the action to be taken when the job is deleted.

2.2 Setup of *config* Tab

For a successful synchronization, a tab must be created on the data sheet of the job type. On the tab, the mapping between the data of the job and the planning element is created by inserting so-called linkage variables, see chapter 2.3 and 2.4.

Note that the name and technical name of the tab must be exactly *config*.

To prevent users from accidentally damaging the synchronization when editing a job, the tab should be set as invisible for all user groups in the visibility settings.

2.3 Configure Fields for the Position in the Element Tree

Planning elements can be created in all levels of the element tree in the Marketing Planner using the synchronization feature. In order to enable the user to set the levels in the job and to ensure correct synchronization afterward, the following variables must be created in the job type:

- *Source variables* on any tab (one variable per desired level):
  The user selects the levels one after the other in these variables. The variable type is *single selection*, the variable is filled by a custom structure. In the custom structure, the selectable elements of the respective level must be entered correctly. If an element exists on a level, under which no element is to be created by the synchronization feature, this element does not have to be listed in the custom structure.
- *Linkage variables* on the *config* tab (one variable per desired level). The variable type is *Simple text* field. To set up the synchronization successfully, the technical name must be named according to one of the two following options:
  - If all jobs based on the type can only be synchronized with planning elements of a fixed tree level, then the technical name of linkage variables must be named as follows:
    PLANNERLEVELx_ttt
    - x = the target level in the element tree of the Marketing Planner
    - ttt = the technical name of the source variable
  - If all jobs based on the type can be synchronized with planning elements on various tree levels, then the technical name of linkage variables must be named as follows:
    PLANNERLEVEL_OPTx_ttt
    - x = the target level in the element tree of the Marketing Planner
    - ttt = the technical name of the source variable

Note

For a planning element to be created, the following conditions must be fulfilled:

- The user has selected for at least the first level in the second case.
- The user has specified a fiscal year, see chapter 2.4.2.

Example for synchronization with planning elements on level 5

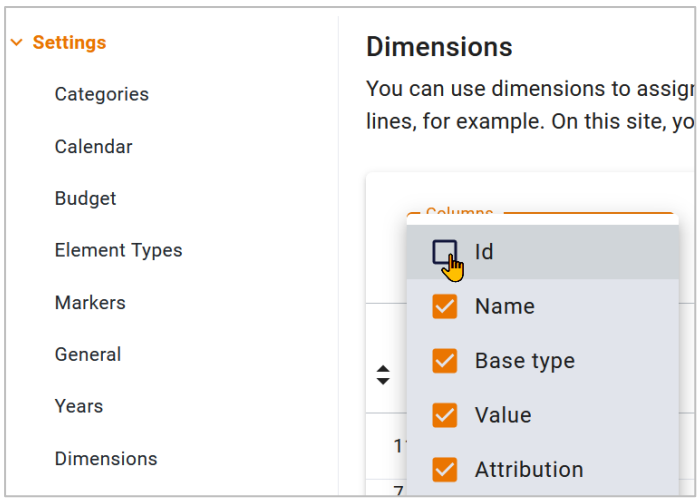
In Marketing Planner	**Linkage variable** (tab ***config***)	**Source variable** (any tab)
Level 1	*Type:* Simple text *Example:* Technical name = PLANNERLEVEL1_Orga1 Note If no corresponding variable is defined, no planning element can be created, and no synchronization takes place.	*Type:* Single selection filled by custom structure *Example:* Technical name = Orga1
Level 2	*Type:* Simple text *Example:* Technical name = PLANNERLEVEL2_Orga2	*Type:* Single selection filled by custom structure *Example:* Technical name = Orga2
Level 3	*Type:* Simple text *Example:* Technical name = PLANNERLEVEL3_Region	*Type:* Single selection filled by custom structure *Example:* Technical name = Region
Level 4	*Type:* Simple text *Example:* Technical name = PLANNERLEVEL4_Campaign	*Type:* Single selection filled by custom structure *Example:* Technical name = Campaign
Level 5	*Type:* Simple text *Example:* Technical name = PLANNERLEVEL5_Activity	*Type:* Single selection filled by custom structure *Example:* Technical name = Activity
Lower-level planning element	*Type:* Simple text *Example:* Technical name = PLANNERSUBNODE Note As soon as this job variable exists, the planning element is created below the planning element that is already linked to the higher-level job. The creation of the planning element using selected tree levels is thus skipped.	No further configuration is necessary.

2.4 Link Planning Element Fields with Job Variables

For correct synchronization of data between Marketing Planner and Job Manager, the fields must be linked to the corresponding job variables. Source and linkage variables are used in the same way as for level selection (see chapter 2.3):

- *Source variables* on any tab (one variable per desired field): In these variables, the user selects the values for the fields in the Marketing Planner. The variable type and its filling can be found in the tables in the following chapters. Please note that the entries that can be selected in the job must exactly match the designations in the Marketing Planner.
- *Linkage variables* on the *config tab* (one variable per desired field): The variable type is *Simple Text* Field. To set up the synchronization successfully, the technical name must be named according to one of the two following options:
  - For the transmission of value of source variable: FIELDNAME_iii_ttt
    - iii = The internal ID of the target dimension in the planning element (only for dimensions)
    - ttt = the technical name of the source variable
  - For the transmission of the display value of source variable: FIELDNAME_iii_ttt_DISPLAYVALUE
    - iii = The internal ID of the target dimension in the planning element (only for dimensions)
    - ttt = the technical name of the source variable

> Note
> The internal ID 'iii' of the target dimension can be obtained via the user interface of the Marketing Planner. To activate the visibility of IDs, enable the checkmark for column *Id* in *Planner > Settings > Dimensions*.



2.4.1 Dimensions

Determine dimension IDs

The dimension ID is not displayed by default. If not visible, the *ID* column can be enabled either in the *Dimensions* tab for an element's detail view in Planner or under *> Planner > Settings > Dimensions.* This column displays the ID of the dimension. You can sort the table by ID in ascending or descending order by clicking on the arrow on the column header.

Please note that in the detailed view of a planning element on the *Dimensions* tab not all dimensions are assigned to each planning element.

In Marketing Planner	**Linkage variable** (tab ***config***)	**Source variable** (any tab)
Single selection with list structure	*Type: Simple text field* *Example:* Technical name = DIMENSIONID_14_agency	*Type:* Single selection from custom structure *Example:* Technical name = agency
Single selection with tree structure	*Type:* Simple text field *Example:* Technical name 1= DIMENSIONID_33_area Technical name 2= DIMENSIONID_33_tool	*Type:* Single selection from custom structure Note Several selection fields must be used, which are linked to the same internal ID 'iii', in order to reproduce the levels of the tree structure of the target dimension. *Example:* Technical name 1 = area Technical name 2 = tool
Long text	*Type:* Simple text field *Example:* Technical name = DIMENSIONID_4_description	*Type:* Multi-line text field *Example:* Technical name = description

In Marketing Planner	Linkage variable (tab *config*)	Source variable (any tab)
	Type: Simple text field Note: To synchronize a relation variable, you have two possibilities: You can synchronize the value or the display value. You decide this by the technical name of the linkage variable: If the technical name contains *DISPLAYVALUE_*, the display value is synchronized. Please note the following examples. *Example:* Synchronization of the value: Technical name = DIMENSIONID_4_relation Synchronization of the display value: Technical name = DIMENSIONID_DISPLAYVALUE_4_relation	*Type:* Relation field *Example:* Technical name = relation
Multiple selection with list structure	*Type:* Simple text field *Example:* Technical name = DIMENSIONID_27_assortment	*Type:* Multiple selection from custom structure *Example:* Technical name = assortment
Free value	*Type:* Simple text field *Example:* Technical name = DIMENSIONID_45_message	*Type:* Simple text field *Example:* Technical name = message

2.4.2 Basic Data

In Marketing Planner	Linkage variable (tab *config*)	Source variable (any tab)
Name	The link between the job name and the name of the planning element takes place automatically.	*System variable:* Jobname No further configuration necessary.
Fiscal year	*Type:* Simple text field *Example:* Technical name = PLANNERYEAR_year	*Type:* Single selection from custom structure *Example:* Technical name = year
Note	*Type:* Simple text field *Example:* Technical name = PLANNERDESC_description	*Type:* Multi-line text field or CK Editor *Example:* Technical name = description

In Marketing Planner	Linkage variable (tab *config*)	Source variable (any tab)
Responsible person	The link between the person responsible in the planning element and the creator of the job takes place automatically.	*System variable:* Creator No further configuration necessary.
Element ID	*Type:* Simple text field *Example:* Technical name = PLANNERNODEID Note When the planning element is created automatically in the Marketing Planner, the resulting internal ID is written back to the job variable. This variable must exist in the job.	No further configuration necessary.

2.4.3 Budget Data

In Marketing Planner	Linkage variable (tab *config*)	Source variable (any tab)
Planned annual budget	*Type:* Simple text field *Example:* Technical name = BUDGETENTRY_*annualbudget*	*Type:* Number *Example:* Technical name = *annualbudget* Note The planned annual budget refers to the current fiscal year. Therefore, the fiscal year must always be set!
Monthly budgets	*Type:* Simple text field *Example:* Technical name = MONTHLYBUDGET1_*aprilbudget* Note For correct synchronization all 12 monthly budgets must be configured. MONTHLYBUDGET1 addresses the first month of the fiscal year. In this example the fiscal year starts in April. The monthly budget of May is addressed with MONTHLYBUDGET2, of December with MONTHLYBUDGET9, etc.	*Type:* Number *Example:* Technical name = *aprilbudget* Note A monthly budget refers to the current fiscal year. Therefore, the fiscal year must always be set!

2.4.4 Timelines

In Marketing Planner	**Linkage variable** **(tab *config*)**	**Source variable** **(any tab)**
Start Date	*Type:* Simple text field *Example:* Technical name = STARTDATE_startdate	*Type:* Date *Example:* Technical name = startdate
End Date	*Type:* Simple text field *Example:* Technical name = ENDDATE_enddate	*Type:* Date *Example:* Technical name = enddate
Color	*Type:* Simple text field *Example:* Technical name = TIMELINECOLOR_12 Note When creating the time period in the Marketing Planner, the color value defined here is used. The color values in the Marketing Planner are numbered and can be taken from the configuration there.	No further configuration necessary.
Name	When you create the period in the Marketing Planner, it automatically receives the name of the job.	No further configuration necessary.
ID	*Type:* Simple text field *Example*: Technical name = PLANNERTIMELINEID Note When creating the period in the Marketing Planner, the resulting period ID is written back to this job variable. This variable must exist in the job.	No further configuration necessary.

2.5 Important Notes for the Configuration

If a sub-job is created with synchronization, the link to the Marketing Planner can only be established if the parent job is also synchronized.

The synchronization feature provides a basic level of error handling. However, make sure that the following points are observed:

- The selection lists defined in the job types must be consistent with the custom objects on which the data source is based.
- The selection lists defined in the job types must exactly match the data for dimensions, colors, and element levels configured in the Marketing Planner.

2.6 Check Configuration

When you have completed the configuration, you can check it. You can verify the type and its workflows in the *Changes* tab.

Check configuration

1. Click *> Administration > Datasheet Engine > Types - New*
2. Find the job type whose configuration you want to validate.
3. Click the icon  in the row of the job type.
4. Click the tab *Changes*.

   The validation of the job type and its workflows is shown here.
5. Click the update icon  in the *Changes* tab of the job type you want to validate if you see an * before the tab name.

   The result of the check is displayed.
6. If there are errors, note *Field* and *Reason*.
7. Click × to close.

The type is closed.

You have checked the configuration. In case of errors, continue to correct them and check again if necessary.

3 Synchronization with a BPMN Process

This chapter describes how to correctly set up synchronization with a BPMN process. The chapter has the following structure:

- Prerequisites and Setup Steps see chapter 3.1: This section describes the requirements that must be met for a successful setup and guides you through all necessary configuration steps. For detailed Information and background information, this chapter links to the following sections.
- Configuration of Process Type see chapter 3.2: This section gives detailed background information on the configuration of the type.
- Configuration of Service Tasks see chapter 3.3: This section gives detailed background information on the configuration of service tasks.

3.1 Prerequisites and Setup Steps

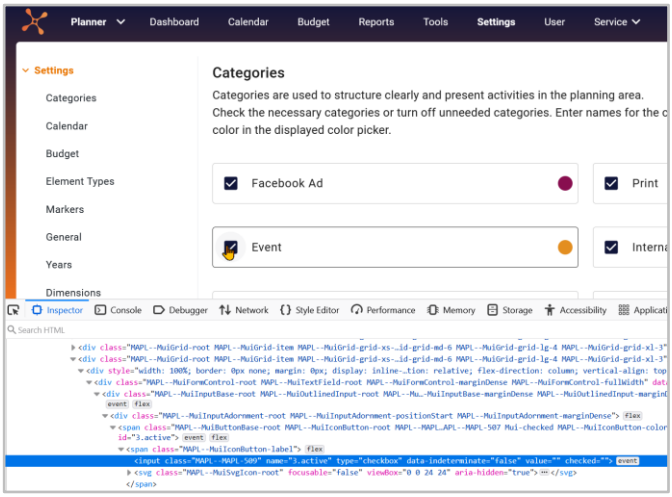
> Note
>
> This description focuses on the configuration steps for a successful setup of the synchronization. Of course, you need to make further configurations for the intended function of the job.

3.1.1 Prerequisites

3.1.1.1 Do timelines need to be synchronized?

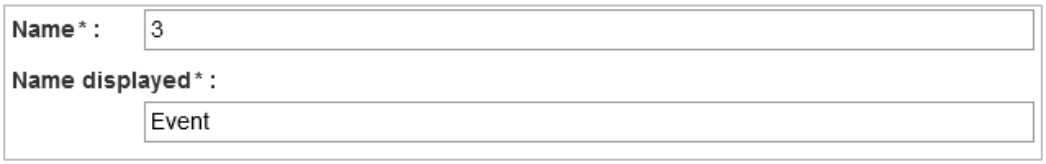
If yes, check whether the custom structure *PM_MAPL_CATEGORY* already exists. If not, execute the following steps:

1. Click > *Planner* > *Settings* > *Categories*.
2. Open *Inspector* in your browser's Developer Tools, e.g. for Firefox via ☰ > *More tools* > *Web Developer Tools*. You can also use the shortcut
3. Ctrl + Shift + I or CMD + Shift + I.
4. Inside Web Developer Tools, use the element picker tool and click the checkbox for the category whose ID you want to determine:



For example, in the above screenshot, the ID of the marked category is 3 and the name is *Event*.

5. Determine the IDs of all needed timeline categories and the corresponding names.
6. Click *> Administration > Data Structures & Workflows > Custom Objects & Structures > Custom Structures*.
7. Create a new custom structure and name it exactly *PM_MAPL_CATEGORY*. The Custom structure has no upper structure and is not an affiliate structure.
8. Save the custom structure.
9. Click *> Administration > Data Structures & Workflows > Custom Objects & Structures > Custom Objects* and select custom structure *PM_MAPL_CATEGORY.*
10. Create one custom object for every needed timeline category and fill in the IDs and names you determined in step 4 as follows:



Enter the ID in the *Name* field and the category's name in the *Name displayed* field.

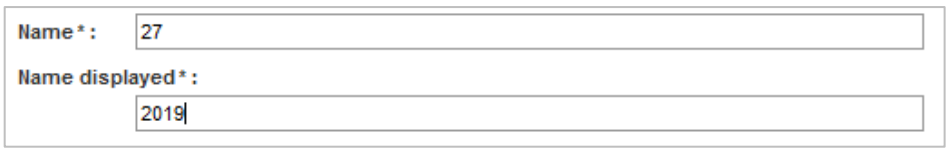
11. Save your changes.

You have set up the custom structure. For background information regarding the synchronization see chapter 3.2.2.2.1.

3.1.1.2 Do planned budgets need to be synchronized?

If yes, check whether the custom structure *PM_MAPL_FY* already exists. If not, execute the following steps:

1. You can use the REST API to determine all existing tree data (fiscal year), which have also IDs.
2. The ID column must be determined via REST.
   ```
   GET /maps/rest/api/{version}/tree
   ```
3. Please refer to our REST documentation, *TreeRestApi > TreeRestApi-GET_getTrees*
4. Click *> Administration > Data Structures & Workflows > Custom Objects & Structures > Custom Structures*.
5. Create a new custom structure and name it exactly *PM_MAPL_FY*. The custom structure has no upper structure and is not an affiliate structure.
6. Save the custom structure.
7. Click *> Administration > Data Structures & Workflows > Custom Objects & Structures > Custom Objects* and select custom structure *PM_MAPL_FY.*
8. Create one custom object for every needed fiscal year and fill in the IDs and names you determined in step 4 as follows:



9. Enter the determined ID in the *Name* field and the fiscal year's name in the *Name displayed* field.
10. Save your changes.

You have set up the custom structure. For background information regarding the synchronization see chapter 3.2.2.2.1.

3.1.1.3 *Are there other variables over which general data or dimension values must be synchronized?*

Each DSE variable of *Single Select* type and *Multi Select* type must use a custom structure as data source. Check chapter 3.2.2.1 to find out which data needs variable of *Single Select* type or *Multi Select* type. Then set up the custom structures accordingly.

Synchronization with BPMN workflows is based solely on IDs of the values that must be synchronized. This has an impact on the names of the custom objects. In case DSE variable is used for synchronization with BPMN workflows, custom objects of the corresponding custom structure must be built as follows:

- Name: ID of dimension value/currency/timeline category/element type/fiscal year etc.
- Display name: as desired

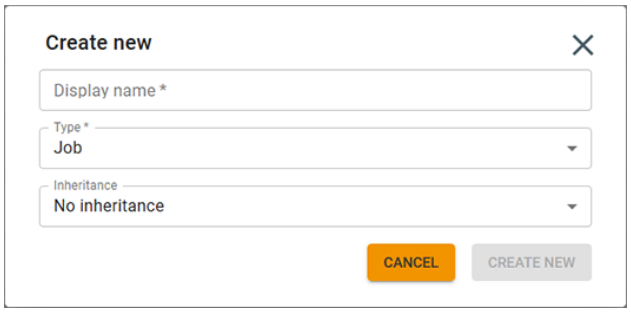
Check the preceding chapters 3.1.1.1 and 3.1.1.2 for examples.

3.1.2 Setup of Process Type

3.1.2.1 *Create Type*

1. Click > *Administration* > *Datasheet Engine* > *Types – New*.
2. Click *Create*.

The following dialog is displayed:



3. Enter a name.
4. In the *Type* selection list, choose *Process*.
5. Click *Create*.

   The dialog *Edit Properties* is displayed.
6. Go to the *Properties* tab.
7. Edit or add to the properties of the type. Note the chapter 2.3.1 in Datasheet Engine Administration Manual.
8. Activate the *Use for synchronization* switch.

A confirmation dialog is shown.

9. Click *Confirm.*

   The Synchronization tab is now active and visible.

10. Go to the *Synchronization* tab.
11. It opens with General and Dimensions by default.
12. Note all general data and dimensions that need to be synchronized.
13. Select Timelines and Budgets.
14. *Optional:* Do timelines need to be synchronized? If yes, then:

Activate the *Synchronize timelines* switch.

15. *Optional:* Do planned budgets need to be synchronized? If yes, then:

Activate the *Synchronize budgets* switch.

16. Select *Planner Levels.*
17. Select the fiscal year from the dropdown menu.
18. The complete element tree of the corresponding fiscal year is displayed on the left side.
19. Select the planner level you want to use as target node.
20. Click → arrow to move it to the right side.
21. Repeat steps 17 to 19 until all the needed data is selected.
22. Go to the *Changes* tab.
23. Click *Publish*.

    A confirmation dialog is shown.

24. Click *Confirm*.

    All changes are published.

25. Click × to close the dialog.

You have created the type and published all the changes.

3.1.2.2 Set up Datasheet Layout

1. Click *> Administration > Datasheet Engine > Datasheet Layout*.
2. Search for the type and open its datasheet layout by clicking the pencil icon.
3. The datasheet layout opens. Several preconfigured variables are displayed in the *Available variables* section on the right side.
4. *Optional:* Do timelines need to be synchronized? If yes, then:
   a. Move the variable *mapl__timelines* to a visible part of the datasheet layout.
   b. If necessary, change the variable's display name to a user-friendly one.
   c. If necessary, change the column names to user-friendly ones.
   d. If you want an error to be shown in job details, add *mapl__timelines_errors* to the visible part of the datasheet layout.
   e. If necessary, change the variable's display name to a user-friendly one.
5. Optional:: Optional:: Do planned budgets need to be synchronized? If yes, then:
   a. Move the variable *mapl__planned__budget* to a visible part of the datasheet layout.
   b. If necessary, change the variable's display name to a user-friendly one.
   c. If necessary, change the column names to user-friendly ones.
   d. If you want an error to be shown in job details, add *mapl__planned__budget_errors* to the visible part of the datasheet layout.
   e. If necessary, change the variable's display name to a user-friendly one.
6. Move the variable *Planner Levels* to a visible part of the datasheet layout.
7. Create variables for all general data and dimensions that need to be synchronized. Note the necessary variable types according to chapter 3.2.2.1.
8. Move the created variables to the visible part of the datasheet.
9. Save the datasheet.
10. Click *> Administration > Datasheet Engine > Publish Changes of Type Configuration.*
11. Click *Publish now*.

    A confirmation dialog is shown.
12. Click *Publish now*.

    Your changes are published.
13. Click *> Administration > Datasheet Engine > Types – New*.
14. In the row of your process type, click the ✎ icon.

    The *Edit properties* dialog opens.
15. Click *> Synchronization > General and Dimensions*.

16. For all needed general data and dimensions, select the according variable you created in step 7.
17. Go to the *Changes* tab.
18. *Click Publish.*

    A confirmation dialog is shown.
19. *Click Confirm.*

    All changes are published.
20. *Click × to close the dialog.*

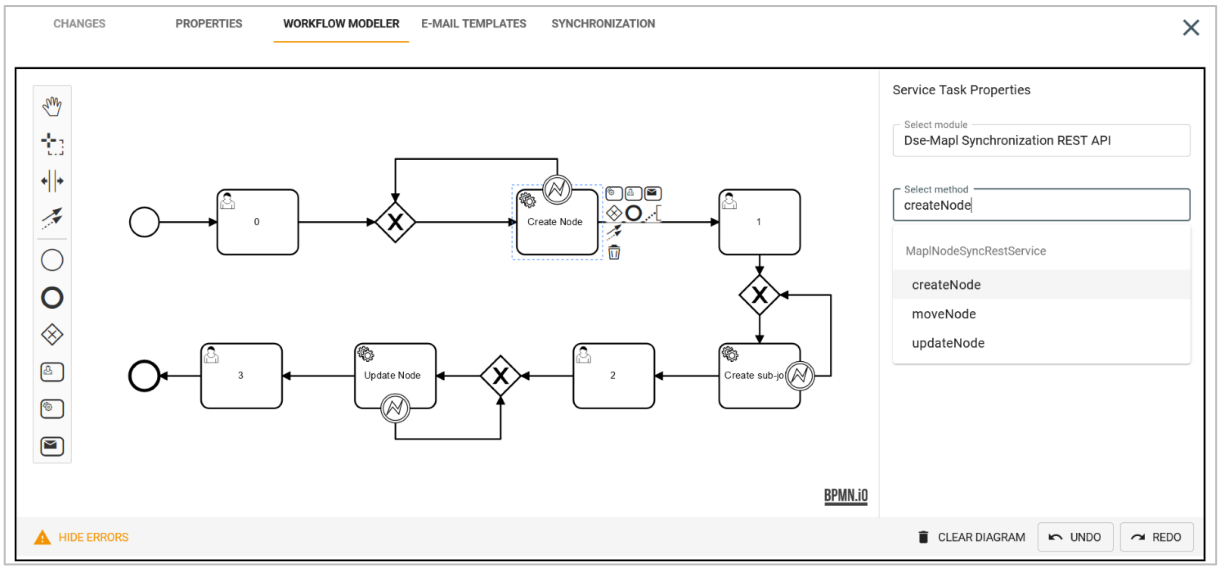
You have set up the necessary datasheet layout and mapped the variables with general data and dimensions.

3.1.3 Setup of Workflow

1. Click > *Administration* > *Datasheet Engine* > *Types* – *New*.
2. In the row of your process type, click the ✎ icon.

The *Edit properties* dialog opens.

3. Click > *Workflow Modeler*.
4. Configure your workflow.
5. Create or select an existing service task.
6. In the *Properties* panel select module *Dse-Mapl Synchronization REST API*.
7. Select method:
   - *createNode* creates a new node.
   - *deleteNode* deletes the corresponding node.
   - *updateNode* updates an existing node.
   - *moveNode* moves an existing node under another parent.



8. Configure input parameters according to chapter 3.3.2.
9. Add error event handlers according to chapter 3.3.3
10. Go to the *Changes* tab.
11. Click *Publish*.

    A confirmation dialog is shown.
12. *Click Confirm.*

    All changes are published.
13. Click ✕ to close the dialog.

You have set up the workflow.

Note

The following actions can be triggered in case a process is deleted or canceled.

- Delete synchronized planning elements
- Cancel sub-processes

Please refer to the latest Job Manager Administrator's Manual, section 3.2.6., Service Tasks.

3.1.4 General Setup of Type

1. Click *> Administration > Datasheet Engine > Variables Access Rights*.
2. If necessary, search for the process type.
3. In the row of your process type, click the pencil icon.

   The *Define Access and Rights* dialog is displayed.
4. Set up the READ and WRITE rights needed.
5. Define *Planner Levels* variable as required.
6. Click *Save*.
7. Click *> Administration > Datasheet Engine > Publish Changes of Type Configuration.*
8. Click *Publish now*.

   A confirmation dialog is shown.
9. Click *Publish now*.

Your changes are published.

3.2 Configuration of Process Type

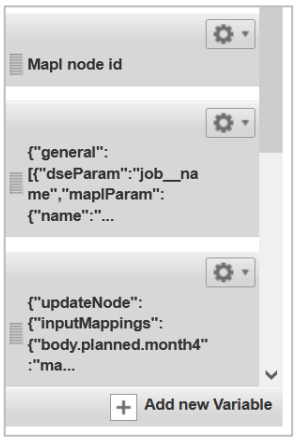
To create synchronization with a BPMN process, create a new process on > *Administration > Datasheet Engine > Types - New*. In the *Properties* tab activate *Use for synchronization* switch. This switch cannot be deactivated afterward.

Once it is activated, specific variables are automatically added to the process type (see chapter 3.2.1) and *Synchronization* tab is displayed (see chapter 3.2.2).

3.2.1 Automatically Added Variables

The following variables are created automatically in the DSE layout once the setting *Use for synchronization* is activated:

- *Planner Levels* (technical name: mapl__parent__tree): This variable is used to determine the path where the node is to be created. The variable must be moved to the visible part of the datasheet layout, and it is highly recommended to set it as mandatory to ensure flawless synchronization.
- *Mapl node id*, *{"general":[{"dseParam"...”* and *“{"updateNode":{"inputMappings":...”*



> Attention
>
> These three variables are needed for technical reasons. Do not rename or remove them! Do not move them to the visible part of the datasheet layout.

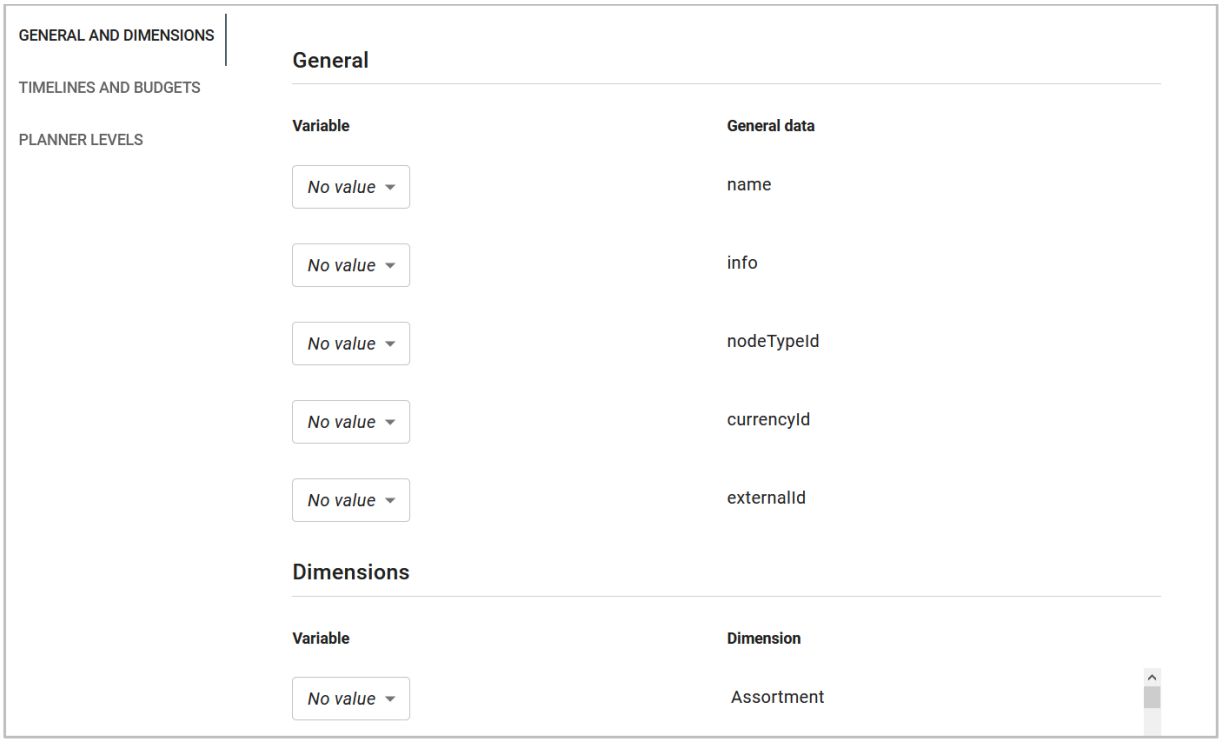
3.2.2 *Synchronization* Tab

The *Synchronization* tab contains the following sections:

- General and dimensions, see chapter 3.2.2.1
- Budgets and timelines, see chapter 3.2.2.2
- Planner levels, see chapter 3.2.2.3

3.2.2.1 General and dimensions

This tab lets you configure the mapping between the type's variables and an element's general information and dimensions.



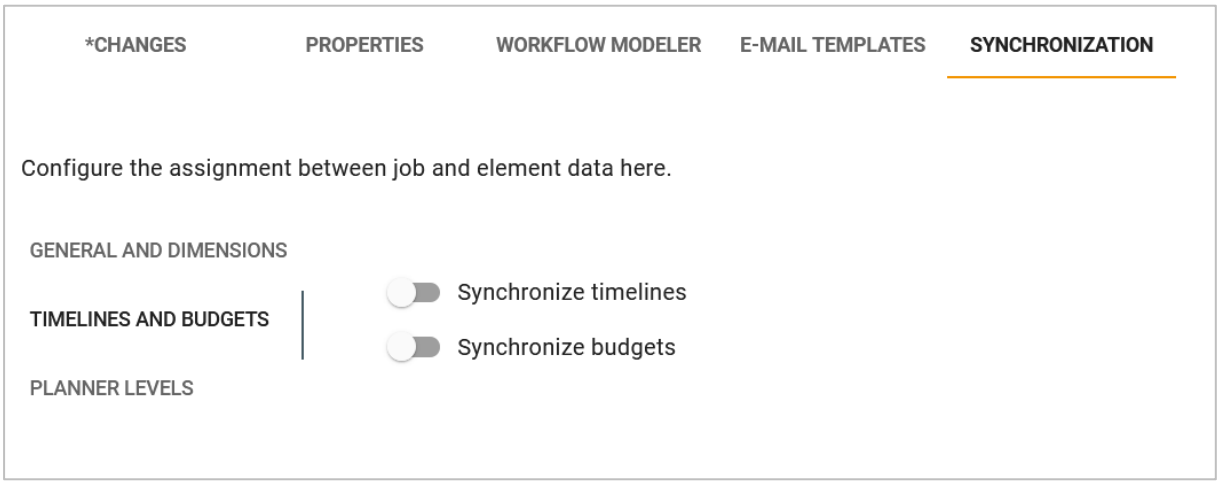
The selection of variables is constrained by their type as represented in the table below.

Variable type	General information / dimension type
Node General information	
Single inputline Multiline input area	name – Name
Single inputline Multiline input area	info - Description

Variable type	General information / dimension type
Single select	nodeTypeId – Element type
Single select	currencyId – Currency
Single select	externalId – External ID
Dimensions	
Single select	List/tree of type Single Selection
Multi select	List/tree of type Multi Selection List/tree of type Weighted Multi Selection
Single inputline Multiline input area	Freetext of type Free Value Freetext of type Continuous text Structured

3.2.2.2 Timelines and budgets

This tab lets you select whether timelines and budgets must be synchronized.

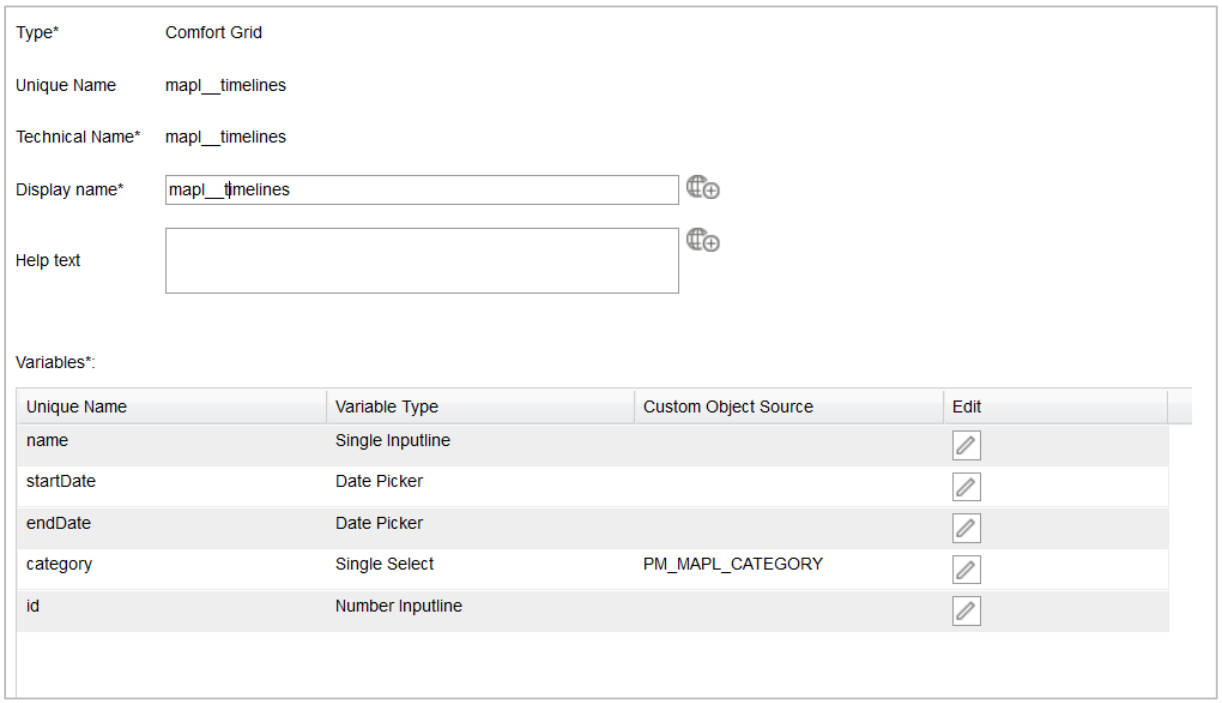


3.2.2.2.1 Synchronize timelines

If you activate *Synchronize timelines*, a variable of *Comfort Grid* type named *mapl__timelines* and a variable of *Multiline input area* type named *mapl__timelines_errors* are created automatically for this process type.

mapl__timelines

The comfort grid is preconfigured as shown in the following screenshot.



You can edit the variable's display name and column names in *> Administration > Datasheet Engine > Datasheet Layout*.

> Attention
>
> It is mandatory to use the custom structure *PM_MAPL_CATEGORY* for the selection of planning element's categories. Please ensure that a custom structure with exactly this name does exist in the system, see chapter 3.1.

mapl__timelines_errors

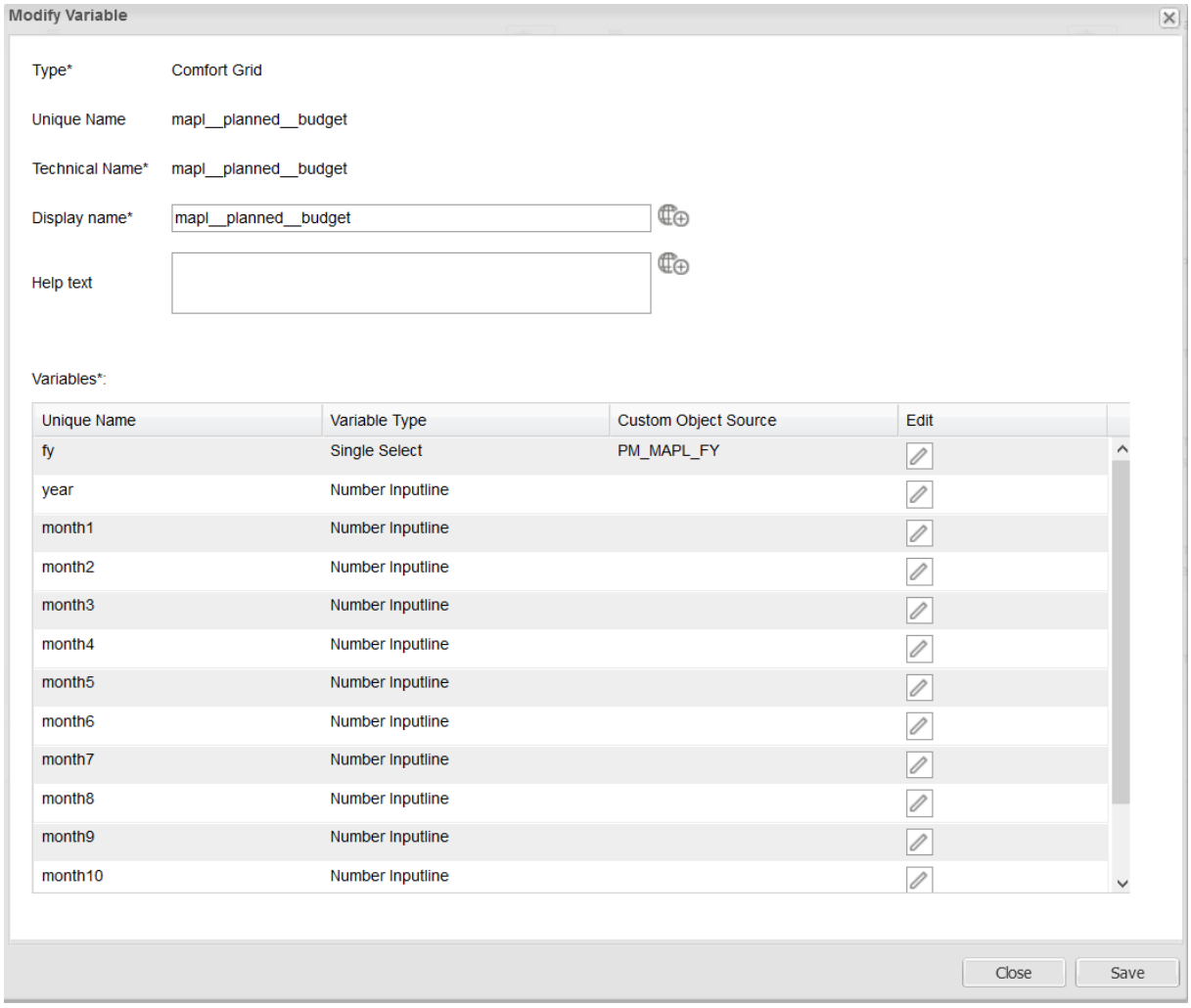
If an error occurred during synchronization of timelines, the error text returned by the service is written into this field. If you want this error text to be displayed in job details, you can add this field to the visible part of the datasheet layout. You can also change the display name of this variable.

3.2.2.2.2 Synchronize budgets

If you activate *Synchronize budgets*, a variable of *Comfort Grid* type named *mapl__planned__budget* and a variable of *Multiline input area* type named *mapl__planned__budget_errors* are automatically created for this process type.

mapl__planned__budget

The comfort grid is preconfigured as shown in the following screenshot.



You can edit the variable's display name and column names in *> Administration > Datasheet Engine > Datasheet Layout*.

> Attention
>
> It is mandatory to use the custom structure *PM_MAPL_FY* for selection of planning element's fiscal years. Please ensure that a custom structure with exactly this name does exist in the system, see chapter 3.1.

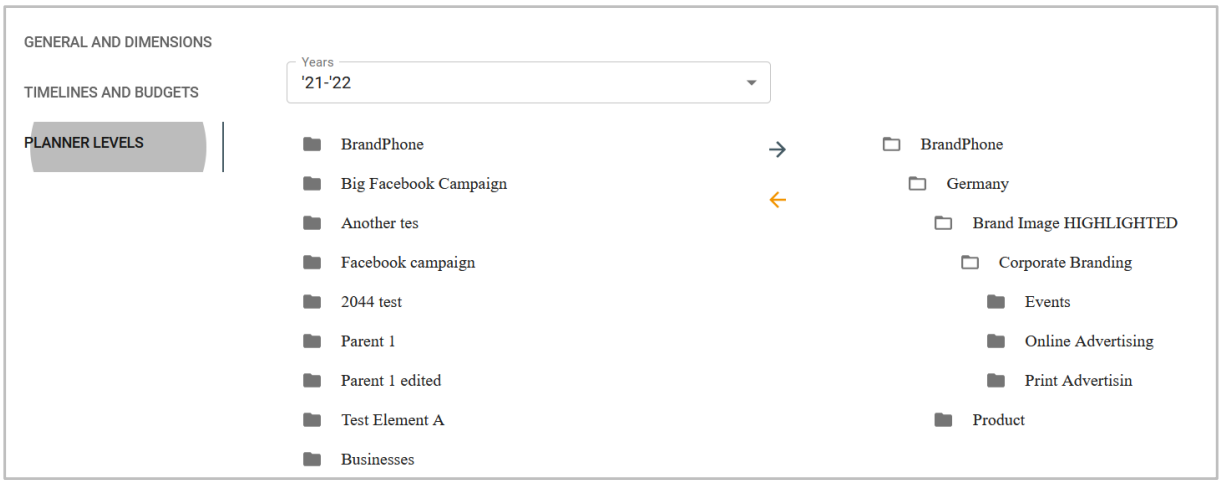
mapl__planned__budget_errors

If an error occurred during synchronization of planned budgets, the returned error text is written into this field by the service.

If you want this error text to be shown on the job's datasheet, you can add the variable to the visible part of the datasheet layout. You can also change its display name.

3.2.2.3 Planner levels

On this tab, you select which planner levels can be used as parent nodes for the nodes to be created via synchronization.



1. Select the fiscal year from the dropdown menu.

   The complete element tree of the corresponding fiscal year is displayed on the left side.

2. Select the planner level you want to use as target node.
3. Click → arrow to move it to the right side.

The selected structure is displayed in job details of the *Planner Levels* variable, see chapter 3.2.1 for details.

> Note
>
> A gray folder icon denotes that this element has children and can be expanded.
> A white folder icon denotes that either the folder is expanded or has no children.

3.3 Configuration of Service Tasks for Synchronization with BPMN Workflows

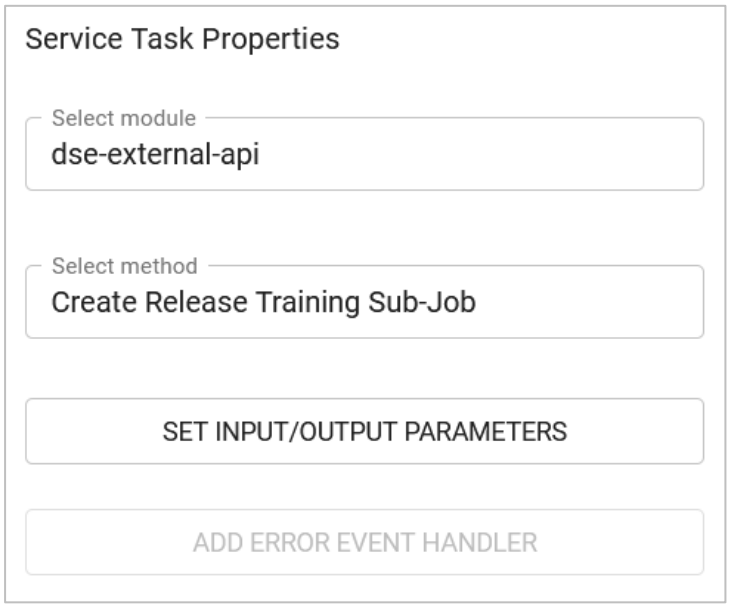
3.3.1 Select Method

Synchronization in BPMN workflows is performed using Service Tasks. These are configured as follows:

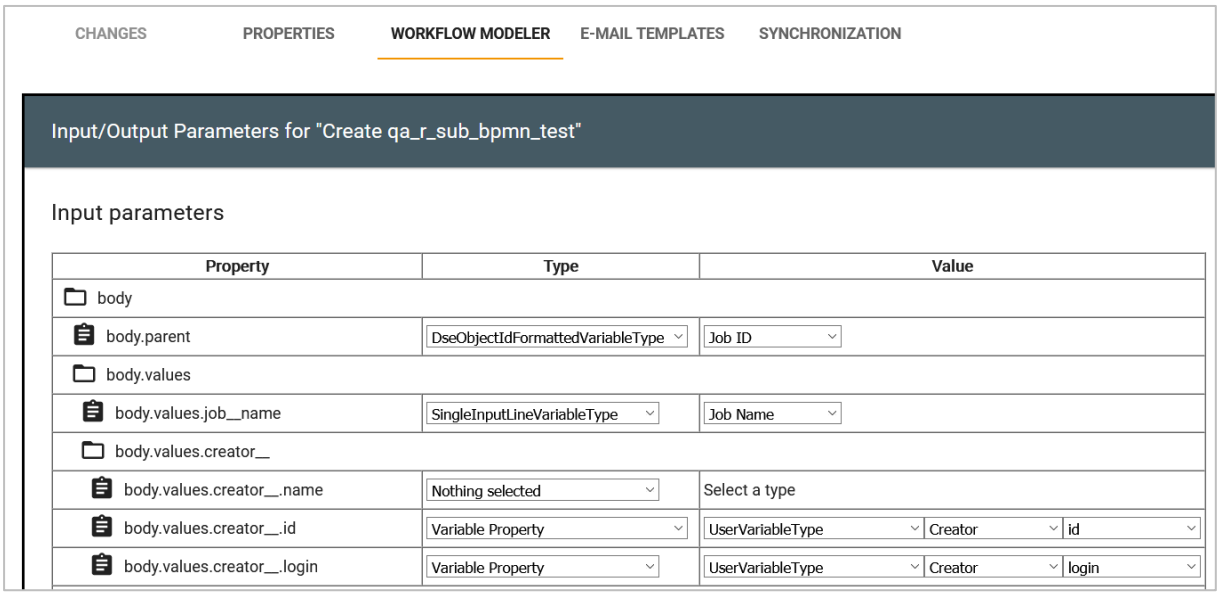
1. Create or select an existing service task.
2. In the *Properties* panel's drop-down menu, select module *Dse-Mapl Synchronization REST API*.
3. Select a method:
   - *createNode* creates a new node.
   - *updateNode* updates an existing node.
   - *moveNode* moves an existing node under another parent.
   - *deleteNode The synchronized* planning element in Planner is removed by the event.

3.3.2 Configure Input Parameters

Mapping between parent's variables and sub-job's variables is done via input parameters: select a service task and click on *Set input/output parameters* in the service task's properties panel on the right side:



A detailed description of the individual parameters is given below.



Input parameters cannot be configured for these methods. They are set automatically depending on the configuration in the *Synchronization* tab.

3.3.2.1 body.parent

If a job created via service task must be a sub-job, select:

- Type: *DseObjectFormattedVariableType*
- Value: *Job ID*

If the *body.parent* property remains empty, the job created via this service task is a normal job, and not a sub-job.

3.3.2.2 body.values

3.3.2.2.1 body.values.job__name

In this field, the name of the job or sub-job is configured.

- *constant*: You can enter any value directly here and it is used as a sub-job name afterward.
- *singleSelect*: You can define any variable of *single select* type as a source for the sub-job name.
- *SingleInputLineVariableType*: You can define any variable of *single input line* type as a source for the sub-job name.
- *MultiLineInputAreaVariableType*: You can define any variable of *multiline input area* type as a source for the sub-job name.

- *VariableProperty*: You can define a property of some variable as a source for the sub-job name.

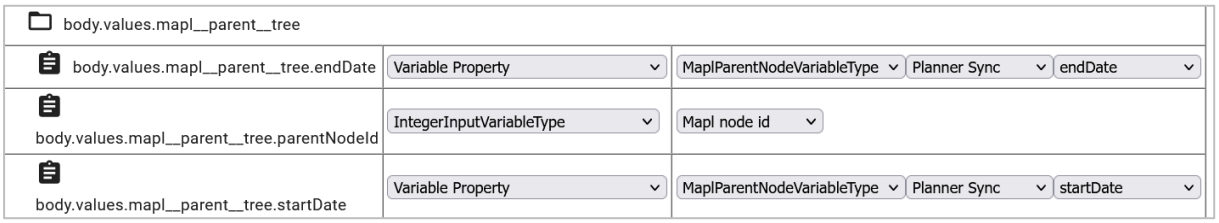
3.3.2.2.2 body.values.creator

In this field the creator of the job or sub-job is configured. To configure the actual creator of a job as a creator, fill in all fields as follows:

> Note
>
> If *body.values.creator* remains empty, then the creator of the job is the system user.

3.3.2.2.3 body.values.mapl__parent__tree

The field must be filled in as in shown in the screenshot below if a sub-job is created via service task. This ensures that the sub-job's node is created under the parent job's node in Marketing Planner.

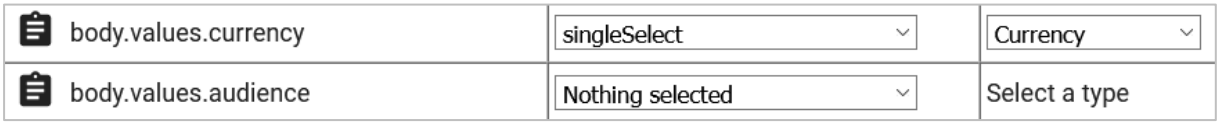


The field can be left empty in case the service task triggers creation of a usual job, not a sub-job.

3.3.2.2.4 Other values

All other fields are used for mapping between parent job variables and sub-job variables. In case mapping was done, corresponding values are copied from the parent job to the sub-job.

Example:



- If a mapping for *body.values.currency* exists: the sub-job's variable *Currency* is filled in with the value of the parent job's variable *Currency*.
- If no mapping for *body.values.audience* is activated: the sub-job's variable *Audience* remains empty, even if this variable is filled in the parent job.

3.3.3 Add Error Event Handler

It is recommended to add an error event handler for all service tasks. Error event handler can lead to any other element in the diagram. This element is executed if an error is returned after execution of a service task. In the example in chapter 3.3.1 above, *Create node* the service task is executed until it has been processed without errors.

> Attention
>
> If no error event handler exists and an error occurs while executing a service task, then the job is finished by Camunda.

