
Integrating SAP Business ByDesign with SAP Concur Using the SAP Cloud Integration - Configuration Guide

Follow this guide to integrate SAP Business ByDesign with SAP Concur using the SAP Cloud Integration



TABLE OF CONTENTS

1. OVERVIEW	3
2. SIMPLE PASS THROUGH	3
3. PASS THROUGH WITH CUSTOMER ENHANCEMENTS	4
4. ENHANCEMENT FOR COST OBJECT REPLICATION – SAMPLE FLOW	6

1. OVERVIEW

This document describes how to set up the integration of SAP Business ByDesign with SAP Concur using the SAP Cloud Integration as a pass-through integration. The solution consists of two integration packages:

1. SAP Business ByDesign with SAP Concur Integration (configure only) This package contains the integration flow
Integrate SAP Business ByDesign with SAP Concur – pass through
(ID *com.sap.byd.concur.integration.passthrough*)
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2. SAP Business ByDesign with SAP Concur Integration Enhancements (editable)
This package contains four integration flows:
 - a) *Integrate SAP Business ByDesign with SAP Concur - enhancement cost object*
(ID *com.sap.byd.concur.integration.enhancement.costObject*)
Enhancement for cost object replication
 - b) *Integrate SAP Business ByDesign with SAP Concur - enhancement employee*
(ID *com.sap.byd.concur.integration.enhancement.employee*)
Enhancement for employee replication
 - c) *Integrate SAP Business ByDesign with SAP Concur - enhancement expense report*
(ID *com.sap.byd.concur.integration.enhancement.expReport*)
Enhancement for expense report replication
 - d) *Integrate SAP Business ByDesign with SAP Concur - enhancement cash advance*
(ID *com.sap.byd.concur.integration.enhancement.cashAdvance*)
Enhancement for cash advance replication© 2018 SAP SE or an SAP affiliate company. All rights reserved.

For general information about the integration scenario, please refer to the SAP Business ByDesign Concur Integration Guide.

2. SIMPLE PASS THROUGH

If SAP Business ByDesign standard functionality (field mapping, usage of custom fields) is used, only the first package needs to be deployed. The integration flow *Integrate SAP Business ByDesign with SAP Concur - pass through* simply transfers incoming messages from SAP Business ByDesign to Concur and returns the response from SAP Concur. The integration scenario covers object master data integration, employee master data integration, and the replication of expense reports and cash advances, including acknowledgement functionality. This is visualized in the following figure 1.

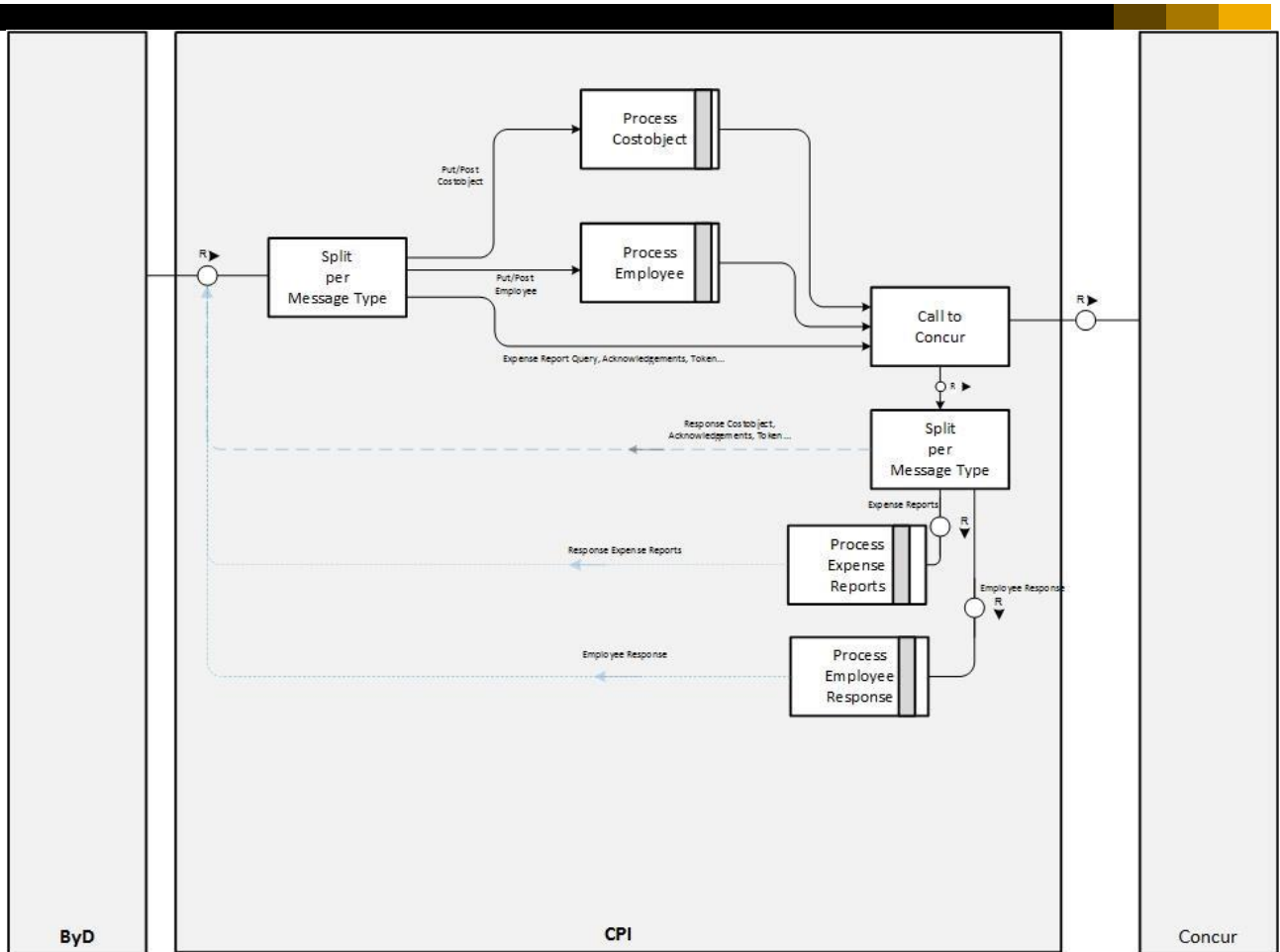


Figure 1: Integration Flow "Integrate SAP Business ByDesign with Concur – pass through"

Procedure

In your SAP Cloud Integration instance, go to the *Discover* area. Search for the package *SAP Business ByDesign to SAP Concur Integration*. Copy the package to your workspace and deploy the Integration Flow *Integrate SAP Business ByDesign with SAP Concur – pass through* (Actions -> Deploy) without further configuration.

3. PASS THROUGH WITH CUSTOMER ENHANCEMENTS

In case deviations from the standard delivery are required, the integration flow *Integrate SAP Business ByDesign with SAP Concur – pass through* can be configured to run through dedicated enhancement flows of the package *SAP Business ByDesign to SAP Concur Integration Enhancements*.

This is indicated by the grey bars in the "Process Cost Object", "Process Employee", "Process Employee Response", "Process Expense Report and Cash Advance" steps.

In detail, these steps are structured as shown in figure 5 below:

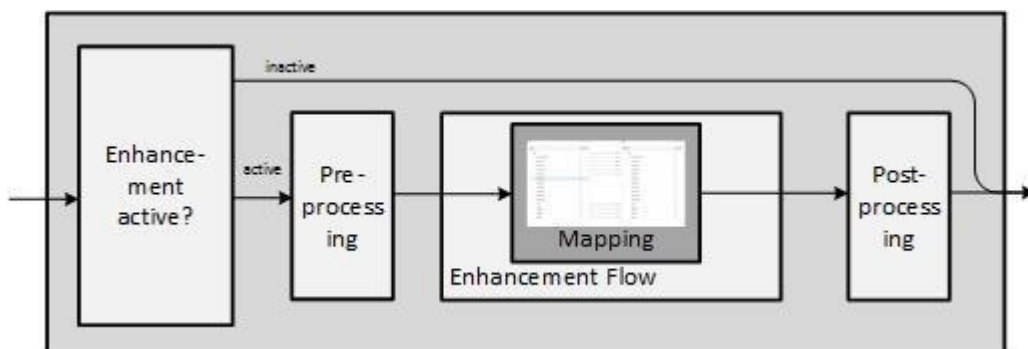



Figure 2: Set up of Process Steps



At first it is checked, whether the respective enhancement (for processing of cost object, employee, expense report or cash advance) is enabled. If this is not the case, the sub flow is quit immediately. Only in case the specific enhancement is configured to be active, the related enhancement integration flow of package *SAP Business ByDesign to SAP Concur Integration Enhancements* is called and executed.

The configuration of the integration flow *Integrate SAP Business ByDesign with SAP Concur – pass through* offers the following possibilities:

- Enhancement for Cost Object – default: false
- Enhancement for Employee – default: false
- Enhancement for Expense Report – default: false
- Enhancement for Cash Advance – default: false

If an enhancement is configured to be active, the corresponding flow in package *SAP Business ByDesign to SAP Concur Integration Enhancements* will be called.

Caution: To use this functionality, the *package SAP Business ByDesign to SAP Concur Integration Enhancements* must be deployed on your SAP Cloud Integration instance as well.

All enhancement flows are delivered with a preconfigured mapping step, which contains a 1:1 mapping resulting in the SAP Business ByDesign standard functionality. As the package *SAP Business ByDesign to SAP Concur Integration Enhancements* is editable, you can

- change the mapping according to your specific requirements
- enhance or rebuild the complete integration flow logic according to your needs.

You must ensure that the resulting XML structure is stable and is supplied in a consistent manner.

Procedure

1. In your SAP Cloud Integration instance, go to the *Discover* area. Search for the package *SAP Business ByDesign to SAP Concur Integration Enhancements*. Copy this package to your workspace.
2. Open the package *SAP Business ByDesign to SAP Concur Integration Enhancements*, edit the respective flow(s) and adapt it to your needs. In case you only want to change the mapping between SAP Business ByDesign and SAP Concur, you may solely reconfigure the mapping step. Please note, that the enhancement flow for employee data consists of two mappings; one for the employee data to be sent to SAP Concur and one for the response. Make sure that you configure the mappings consistently, especially if your mapping is changing the employee ID. Otherwise the response cannot be processed correctly in the SAP Business ByDesign solution.
3. Deploy the enhancement integration flows in use.
4. In your SAP Cloud Integration instance, go to the *Discover* area. Search for the package *SAP Business ByDesign to SAP Concur Integration*. Copy this package to your workspace.
5. Configure the integration flow *Integrate SAP Business ByDesign with SAP Concur – pass through* of the package *SAP Business ByDesign to SAP Concur Integration*.

Choose the integration flow in the package and perform *Actions* -> *Configure*.

Set those enhancements to *true* that you are going to use.

- ✦ Enhancement for Cost Object – default: false
- ✦ Enhancement for Employee – default: false

- ✦ Enhancement for Expense Report – default: false
- ✦ Enhancement for Cash Advance – default: false

6. Deploy the integration flow *Integrate SAP Business ByDesign with SAP Concur – pass through*.

For the configuration of the SAP Business ByDesign and SAP Concur systems, please refer to the Business ByDesign Concur Integration Guide.

4. ENHANCEMENT FOR COST OBJECT REPLICATION – SAMPLE FLOW

In SAP standard the integration scenario is using a 4-level connected list for cost objects consisting of

- Source System
- Company
- Cost Object Type
- Cost Object ID

If your SAP Concur configuration requires a different connected list, for example with more levels you will not only need to change the mapping of the cost object message, you also will have to create additional entries in the list to continue to provide a complete chain of levels. To help you to implement the enhancement in such a case we deliver a local integration process as an example flow.

The local integration flow handles the use case that you want to send a 5-level list with a constant value (i.e. business area) in level 3.

The SAP Business ByDesign solution sends out the cost objects in a 4-level connected list

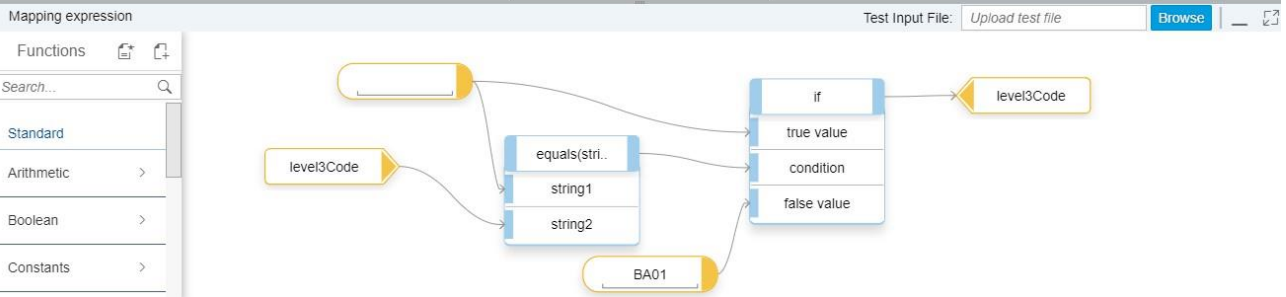
Level1	Level2	Level3	Level4	Description
SYS123				System 123
SYS123	CPNY1000			Company 1000
SYS123	CPNY1000	CC		Cost Center
SYS123	CPNY1000	CC	CC1001	Cost Center One
SYS123	CPNY1000	CC	CC1002	Cost Center Two

This payload shall be converted into a 5-level connected list with the following content

Level1	Level2	Level3	Level4	Level5	Description
SYS123					System 123
SYS123	CPNY1000				Company 1000
SYS123	CPNY1000	BA01			Business Area 1
SYS123	CPNY1000	BA01	CC		Cost Center
SYS123	CPNY1000	BA01	CC	CC1001	Cost Center One
SYS123	CPNY1000	BA01	CC	CC1002	Cost Center Two

The mapping has to be changed assigning the level 3 value to level 4 and the level 4 value to level 5. Additionally, level 3 shall be filled with the constant value, but only if also level 3 of the source structure was not initial. So for the first two list items of the connected list level3 should remain initial.

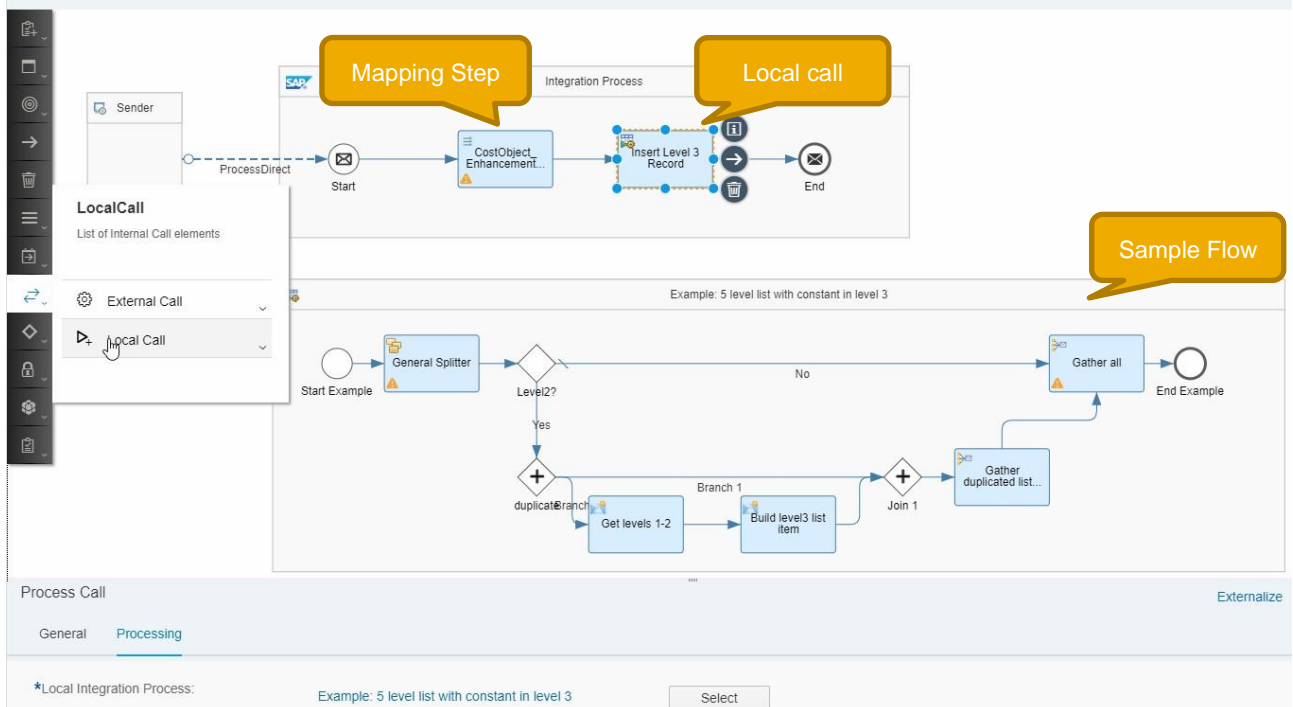
Structure	Occure...		Structure	Occure...
Root	1..1		Root	1..1
CO_COSTOBJECT	0..*		CO_COSTOBJECT	0..*
level1Code	0..1		level1Code	0..1
level2Code	0..1		level2Code	0..1
level3Code	0..1		level3Code	0..1
level4Code	0..1		level4Code	0..1
level5Code	0..1		level5Code	0..1



With this mapping the implementation is not yet complete, because the list item publishing level 3 (marked in red in the table above) would be missing. In that case the SAP Concur solution will reject all dependent list items.

To create the missing list item you can do a local call to the sample flow.

Integrate SAP Business ByDesign with SAP Concur - enhancement cost object



It basically duplicates the level 2 list item, gathers the initial list item into the payload without changes but modifies the copy to also hold the constant value in level 3 and provide an appropriate description for this level. To do this you still have to adapt the Message Body of the content modifier step *Build level3 list item*.

Instead of “Dummy” insert the constant value you want to use and replace “DummyName” by a meaningful description.

```
<?xml version='1.0' encoding='UTF-8'?>
<Root>
<CO_COSTOBJECT>
<level1Code>${property.level1}</level1Code>
<level2Code>${property.level2}</level2Code>
<level3Code>Dummy</level3Code>
<level4Code/>
<level5Code/>
<level6Code/>
<level7Code/>
<level8Code/>
<level9Code/>
<level10Code/>
<name>DummyName</name>
<startDate/>
<endDate/>
<deleted/>
</CO_COSTOBJECT>
</Root>
```



```
<?xml version='1.0' encoding='UTF-8'?>
<Root>
<CO_COSTOBJECT>
<level1Code>${property.level1}</level1Code>
<level2Code>${property.level2}</level2Code>
<level3Code>BA01</level3Code>
<level4Code/>
<level5Code/>
<level6Code/>
<level7Code/>
<level8Code/>
<level9Code/>
<level10Code/>
<name>Business Area 1</name>
<startDate/>
<endDate/>
<deleted/>
</CO_COSTOBJECT>
</Root>
```


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