Data Migration: Item
SAP Business One to SAP S/4HANA Cloud Public Edition Guide

For SAP Cloud Integration

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1. Introduction

In this guide you shall learn how to consume the integration flow to transform data of an object in SAP Business one into a form suitable and acceptable by SAP S/4HANA Cloud Public Edition.

1.1. Definition

This integration flow is an accelerator that transforms the standard data of 'Item' object in SAP Business One into the SAP S/4HANA Cloud Public Edition's migration template of object 'Product'.

1.2. Intended Audience

This integration flow is intended to be used by both partners and customers who are in the data migration phase of their implementation project for moving their SAP Business One system to SAP S/4HANA Cloud Public Edition system. This integration flow shall act as an accelerator to kick start and speed up your data migration task. However, it does not cover all attributes and mappings, hence enhance it as per your requirement.

1.3. Structure

The structure of this guide follows the sequence of steps required to consume the integration flow for the purpose of data transformation using SAP Integration Suite service on SAP BTP.

1.4. System Connectivity

To use this integration flow, you don't have to connect your SAP Business One system or SAP S/4HANA Cloud system to SAP Integration Suite. The data extracted from SAP Business One is passed to SAP Integration Suite over HTTPS and the data prepared as output is a file that can be taken manually and uploaded in SAP S/4HANA Cloud Public Edition via Migration Cockpit.

1.5. Additional Documentation

You may refer to these topics via links to gain insights into various topics you need to know before using the integration flow.

SAP Integration Suite
https://help.sap.com/docs/cloud-integration/sap-cloud-integration/sap-cloud-integration?version=Cloud

SAP S/4HANA Cloud Public Edition Migration Cockpit
https://help.sap.com/docs/SAP_S4HANA_CLOUD/d5699934e7004d048c4801b552f3b013/f32db0c240484241abc53a876253e118.html?version=2408.500

Technical Data Migration to SAP S/4HANA Cloud
https://learning.sap.com/video-playlists/migrating-data-from-sap-business-bydesign-to-sap-s-4hana-cloud

Setting up Required systems and Users
https://learning.sap.com/videos/preparing-for-data-migration-from-sap-business-bydesign-to-sap-s-4hana-cloud

2. Business Scenario

Customers who are looking to migrate from SAP Business One ERP system to SAP S/4HANA Cloud Public Edition ERP system need an easy data migration path to save time and effort on data migration activities which is quite intensive.

With this intention SAP has delivered the mapping of data fields from SAP Business One Item object to SAP S/4HANA Cloud Public Edition equivalent object as part of this integration flow. The end result of the integration flow will provide you the file that Item is in the form of SAP S/4HANA Cloud Public Edition's Product migration template. You shall upload this file via Migration Cockpit in SAP S/4HANA Cloud Public Edition. This helps you to save effort and prepare the file easily for upload.

3. Prerequisites

To consume the integration flow, you should have the following things done

a) Set up account in SAP BTP and subscribe to SAP Integration Suite service.
b) Set up required user roles and authorization in SAP BTP subaccount
c) Set up the required capabilities in SAP Integration Suite to trigger integration flow.
d) User should have authorisation to the Migration Cockpit app in SAP S/4HANA Cloud Public Edition
e) The user should have access to the Item module in SAP Business One system.
f) User should use the date format **DD.MM.YYYY** when extracting from SAP Business One system
g) User should use the Query Generator in SAP Business One to extract the data.
h) The data obtained from Query Generator should be exported in the format *.xlsx

Please refer to the links mentioned in the section Additional Documentation to complete the prerequisites.

4. Consumption of integration flow

Follow the steps below to transform your data and upload to SAP S/4HANA Cloud Public Edition.

4.1. Data Extraction

To consume the integration flow for transformation you need to extract the required Item data from SAP Business One system.

Extract the data from SAP Business One: Item data is extracted from the SAP Business One using the following approach.

1. Run the below queries one by one in SAP Business One system. These queries collect data from all relevant tables where Item data is stored.

    a) Basic Data

    ```
    SELECT "OITM"."ItemCode" AS "Product Number",  "OITM"."ItemType" AS "Product Type", "OITB"."ItmsGrpCod" AS "Product Group", "OITM"."ItemName" AS "Description", 'EN' AS "Language Key",  "OITM"."InvntryUom" AS "Base Unit of Measure","OITM"."ManBtchNum" AS "Indicator", COALESCE("OITM"."validFrom", '20200101') AS "Valid From",  "OITM"."PrcrmntMtd" AS "Indicator: QM in Procurement Is Active","OITM"."SWeight1" AS "Gross Weight","OITM"."SWeight1" AS "Net Weight",  "OWGT"."UnitDisply" AS "Unit of Weight",  "OITM"."SLength1" AS "Length","OITM"."SWidth1" AS "Width",  "OITM"."SHeight1" AS "Height",  "LENUNT"."VolDisply" AS "Unit for Length/Width/Height", "OITM"."SVolume" AS "Volume",  "VOLUNT"."VolDisply" AS "Volume Unit", "PLENUNT"."VolDisply" AS "Unit of Measure Value",  "OITM"."MatGrp" AS "Product Group: Packaging Materials",  "OITM"."SalPackMsr" AS "Unit of Allowed Packaging Weight",  "OITM"."SellItem" AS "Indicator: Sales", "OITM"."InvntItem" AS "Indicator: Storage", "OITM"."PrchseItem" AS "Indicator: Purchasing" FROM "OITM" LEFT JOIN "OITB" ON "OITM"."ItmsGrpCod" = "OITB"."ItmsGrpCod" LEFT JOIN "OLGT" AS "LENUNT" ON "OITM"."SLen1Unit" = "LENUNT"."UnitCode" LEFT JOIN "OLGT" AS "PLENUNT" ON "OITM"."BLen1Unit" = "PLENUNT"."UnitCode" LEFT JOIN "OWGT" ON "OITM"."SWght1Unit" = "OWGT"."UnitCode" LEFT JOIN "OLGT" AS "VOLUNT" ON "OITM"."SVolUnit" = "VOLUNT"."UnitCode" INNER JOIN "OITT" ON "OITM"."ItemCode" = "OITT"."Code" --WHERE "OITM"."ItemCode" = 'R00002';
    ```

    b) Additional Descriptions

    ```
    SELECT "OMLT"."PK"AS "Product Number", "OLNG"."ShortName" AS "Language Key", "MLT1"."Trans" AS "Product Description" FROM "MLT1" INNER JOIN "OMLT" ON "OMLT"."TranEntry" = "MLT1"."TranEntry" INNER JOIN "OLNG" ON "MLT1"."LangCode" = "OLNG"."Code" WHERE "OMLT"."TableName" = 'OITM' AND "OMLT"."PK" = 'R00002';
    ```

    c) Alternative Units Of Measure

    ```
    SELECT "OITM"."ItemCode" AS "Product Number", "OUOM"."UomCode" AS "Alternative Unit of Measure", "UGP1"."BaseQty" AS "Denominator for Conversion to Base Unit","UGP1"."AltQty" AS "Numerator for Conversion to Base Unit", "OUOM"."Length1" AS "Length", "OUOM"."Width1"AS "Width", "OUOM"."Height1"AS "Height","LENUNT"."UnitDisply" AS "Unit for Length/Width/Height", "OUOM"."Weight1"AS "Gross Weight", "WGHUNT"."UnitDisply"AS "Unit of Weight","OUOM"."Volume" AS "Volume","VOLUNT"."UnitDisply"AS "Volume Unit" FROM "OITM" INNER JOIN "UGP1" ON "UGP1" ."UgpEntry" = "OITM"."UgpEntry" INNER JOIN "OUOM" ON "OUOM"."UomEntry" ="UGP1"."UomEntry" INNER JOIN "OLGT" AS "LENUNT" ON "LENUNT"."UnitCode" "OUOM"."Len1Unit" INNER JOIN "OWGT"  AS "WGHUNT" ON "WGHUNT"."UnitCode" = "OUOM"."WghtUnit" INNER JOIN "OLGT" AS "VOLUNT" ON "VOLUNT"."UnitCode" = "OUOM"."VolUnit" WHERE "OITM"."ItemCode" = 'R00002';
    ```

    d) Warehouse Product

    ```
    SELECT "ItemCode" AS "Product Number", "WhsCode" AS "Warehouse Number", 'Party Entitled to Dispose' AS "Party Entitled to Dispose "FROM "OITW";
    ```

    e) Warehouse Product Storage Type

    ```
    SELECT  "OITW"."ItemCode" AS "Product Number", "OITW"."WhsCode" AS "Warehouse Number", 'Party Entitled to Dispose'AS "Party Entitled to Dispose",'Storage Type' AS "Storage Type", "OWHS"."DftBinAbs"AS "Storage Section Indicator", "OBIN"."BinCode" AS "Storage Bin Type", "OBIN"."MinLevel" AS "Minimum Quantity', "OBIN"."MaxLevel" AS "Maximum Quantity" FROM
    ```

"OITW" INNER JOIN "OWHS" ON "OITW"."WhsCode" = "OWHS"."WhsCode" INNER JOIN "OBIN" ON "OBIN"."WhsCode" = "OWHS"."WhsCode" WHERE "OWHS"."WhsCode" = '05';

f) Production Resources Tools

SELECT "ITT1"."Code"AS "Product Number", 'PLANT VALUE' AS "Plant", "ITT1"."Quantity" AS "Quantity Formula" FROM "ITT1" INNER JOIN "OITT" ON "OITT"."Code" = "ITT1"."Father" AND ("OITT"."TreeType" = 'P' OR "OITT"."TreeType" = 'A')

g) Valuation Data

SELECT "ITM1"."ItemCode" AS "Product Number", "OPLN"."ListName" AS "Valuation Type", "OITB"."ItmsGrpNam" AS "Valuation Class", "ITM1"."Price" AS "Price Control", "OADM"."MainCurncy"AS "Currency", "OITM"."AvgPrice" AS "Inventory Price Moving Average" FROM "ITM1" INNER JOIN "OITM" ON "ITM1"."ItemCode" = "OITM"."ItemCode" LEFT JOIN "OPLN" ON "ITM1"."PriceList" = "OPLN"."ListNum" LEFT JOIN "OITB" ON "OITM"."ItmsGrpCod" "OITB"."ItmsGrpCod" LEFT JOIN "OADM" ON 1=1 ORDER BY "ITM1"."ItemCode", "OPLN"."ListName"

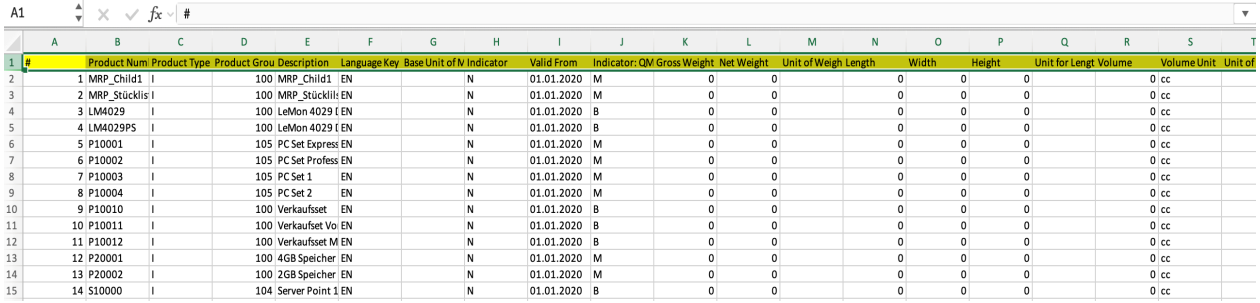
2. Export the result of each query in an excel file, thereby generating multiple excel files, that contains data of Item in different views. Name each of the file as mentioned below. **Make sure that you do not use any other name**.
    a. Basic Data:*Basic Data.xlsx*
    b. Additional Descriptions: *Additional* Descriptions.*xlsx*
    c. Alternative Units Of Measure : *Alternative Units Of Measure.xlsx*
    d. Warehouse Product: *Warehouse Product.xlsx*
    e. Warehouse Product Storage Type: *Warehouse Product Storage Type.xlsx*
    f. Production Resources Tools: *Production Resources Tools.xlsx*
    g. Valuation Data: *Valuation Data.xlsx*

4.2. Data Preparation

The data extracted is in raw form and cannot be consumed by the integration flow. Therefore, you should prepare the data in the form that integration flow can accept.

Prepare the extracted data: Formatting and merging of various files is required to be done as part of preparation of the data for iflow.

1. Each output excel file should be in the form as shown below. DO NOT CHANGE the column names (highlighted in yellow). For example the General Data file(Basic Data.xlsx) should look like this:



#	Product Num	Product Type	Product Grou	Description	Language Key	Base Unit of M	Indicator	Valid From	Indicator: QM	Gross Weight	Net Weight	Unit of Weigh	Length	Width	Height	Unit for Lengt	Volume	Volume Unit	Unit of
1	#	Product Num	Product Type	Product Grou	Description	Language Key	Base Unit of M	Indicator	Valid From	Indicator: QM	Gross Weight	Net Weight	Unit of Weigh	Length	Width	Height	Unit for Lengt	Volume	Volume Unit	Unit of
2	1	MRP_Child1	I	100	MRP_Child1	EN		N	01.01.2020	M	0	0	0	0	0	0	0	cc	
3	2	MRP_Stücklis	I	100	MRP_Stücklis	EN		N	01.01.2020	M	0	0	0	0	0	0	0	cc	
4	3	LM4029	I	100	LeMon 4029 (	EN		N	01.01.2020	B	0	0	0	0	0	0	0	cc	
5	4	LM4029PS	I	100	LeMon 4029 (	EN		N	01.01.2020	B	0	0	0	0	0	0	0	cc	
6	5	P10001	I	105	PC Set Express	EN		N	01.01.2020	M	0	0	0	0	0	0	0	cc	
7	6	P10002	I	105	PC Set Profess	EN		N	01.01.2020	M	0	0	0	0	0	0	0	cc	
8	7	P10003	I	105	PC Set 1	EN		N	01.01.2020	M	0	0	0	0	0	0	0	cc	
9	8	P10004	I	105	PC Set 2	EN		N	01.01.2020	M	0	0	0	0	0	0	0	cc	
10	9	P10010	I	100	Verkaufsset	EN		N	01.01.2020	B	0	0	0	0	0	0	0	cc	
11	10	P10011	I	100	Verkaufset Vo	EN		N	01.01.2020	B	0	0	0	0	0	0	0	cc	
12	11	P10012	I	100	Verkaufsset M	EN		N	01.01.2020	B	0	0	0	0	0	0	0	cc	
13	12	P20001	I	100	4GB Speicher	EN		N	01.01.2020	M	0	0	0	0	0	0	0	cc	
14	13	P20002	I	100	2GB Speicher	EN		N	01.01.2020	M	0	0	0	0	0	0	0	cc	
15	14	S10000	I	104	Server Point 1	EN		N	01.01.2020	B	0	0	0	0	0	0	0	cc	

2. Zip all the excel files to create one *.ZIP file and save it. This zip file is the payload for the iflow.

4.3. Data Transformation

Once the data is prepared and ready in the required form, you are ready to execute the integration flow.

Make the following preparations to load the integration flow for executing data transformation.

I. Download the iflow for Item for B1 (provided by SAP).
II. Upload the iflow in your SAP Integration Suite system.
III. Deploy the integration flow.
IV. After successful deployment of integration flow, make a note of the End Point URL generated.

To consume the integration flow for data transformation and create a S/4HANA migration file, follow the steps below .For details refer to the learning session.

I. Set up an application to trigger the integration flow e.g., Postman.
II. Create a POST HTTP request, provide the user credentials, and upload the ZIP file (created in Data Preparation step) in the body of the request.
III. Send the request to the end point URL of integration flow. This will trigger the integration flow and start the data transformation. As a result, you shall receive a response file back from your triggering application.
IV. Save the response ZIP file received. Extract the ZIP package and Open the XML file in Microsoft Excel. Click on *Save*.

Note: In the response XML, some records might contain fields that require your attention. These instances can be identified by locating cells with the value **“<<Enter Manually>>”**.

4.4. Data Upload

Once the data is transformed and you have received the S/4HANA template file filled with the data (response file) you are ready to upload the same to S/4HANA system via Migration Cockpit.

Follow the below steps to upload the data to S/4HANA system:

a. Save the response ZIP file received.
b. Extract the ZIP package and open the XML file in Microsoft Excel. Click on save. Close the file.
c. This is the file that should be taken to SAP S/4HANA Cloud Public Edition migration project and uploaded. For details on uploading a file via migration cockpit in SAP S/4HANA Cloud Public Edition refer to this help document.

5. Customization and Enhancement of integration flow

You can customize the mapping or enhance the integration flow as per your requirement. For details on customization, you can refer to these tutorials. These tutorials are built for SAP Business ByDesign, but the same concept applies to SAP Business One object iflows.

- Tutorial 1: Customizing standard integration flows for data migration from SAP Business ByDesign to SAP S/4HANA Cloud Public Edition.
- Tutorial 2: Updating data structure in integration flows for data migration from SAP Business ByDesign to SAP S/4HANA Cloud Public Edition.

6. Contact Information

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Support Ticket Component:
CA-S4H-B1-IFLOW