

Data Migration: Customer 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 'Customer' object in SAP Business One into the SAP S/4HANA Cloud Public Edition's migration template of object 'Customer'.

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 of 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 Customer 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 Customer file that is in the form of SAP S/4HANA Cloud Public Edition's Customer 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 Customers 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 set the language to "**English(United States)**" when extracting from SAP Business One system.
- h) User should use the Query Generator in SAP Business One to extract the data.
- i) 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 Customers data from SAP Business One system.

Extract the data from SAP Business One: Customer 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 Customer data is stored.

a) General Data

```
SELECT T0."CardName", T0."CardCode", T0."CmpPrivate", T0."Address", CAST(T0."ZipCode" AS
VARCHAR(50)) AS "Bill-to Zip Code", T0."Phone1", T0."Phone2", T0."Fax", T0."Cellular", T0."City",
T0."Country", T0."E_Mail", T0."CardFName", T0."frozenFor", T0."frozenFrom", T0."frozenTo", T0."DME",
T0."InstrucKey", T0."AliasName", T0."Building", T0."IntrntSite", T0."StreetNo", T1."BirthPlace",
T1."BirthDate", T1."Gender", T1."Title", T1."FirstName", T1."MiddleName", T1."LastName",
T4."GroupName", T2."Name" AS "LGname", T5."IndName", T3."State", T3."AdresType", T3."TaxOffice",
CASE WHEN T0."QryGroup1" = 'Y' THEN (SELECT T9."GroupName" FROM "OCQG" T9 WHERE
T9."GroupCode" = 1) ELSE " " END AS "Attribute 1", CASE WHEN T0."QryGroup2" = 'Y' THEN (SELECT
T9."GroupName" FROM "OCQG" T9 WHERE T9."GroupCode" = 2) ELSE " " END AS "Attribute 2", CASE
WHEN T0."QryGroup3" = 'Y' THEN (SELECT T9."GroupName" FROM "OCQG" T9 WHERE
T9."GroupCode" = 3) ELSE " " END AS "Attribute 3", CASE WHEN T0."QryGroup4" = 'Y' THEN (SELECT
T9."GroupName" FROM "OCQG" T9 WHERE T9."GroupCode" = 4) ELSE " " END AS "Attribute 4", CASE
WHEN T0."QryGroup5" = 'Y' THEN (SELECT T9."GroupName" FROM "OCQG" T9 WHERE
T9."GroupCode" = 5) ELSE " " END AS "Attribute 5", CASE WHEN T0."QryGroup6" = 'Y' THEN (SELECT
T9."GroupName" FROM "OCQG" T9 WHERE T9."GroupCode" = 6) ELSE " " END AS "Attribute 6", CASE
WHEN T0."QryGroup7" = 'Y' THEN (SELECT T9."GroupName" FROM "OCQG" T9 WHERE
T9."GroupCode" = 7) ELSE " " END AS "Attribute 7", CASE WHEN T0."QryGroup8" = 'Y' THEN (SELECT
T9."GroupName" FROM "OCQG" T9 WHERE T9."GroupCode" = 8) ELSE " " END AS "Attribute 8", CASE
WHEN T0."QryGroup9" = 'Y' THEN (SELECT T9."GroupName" FROM "OCQG" T9 WHERE
T9."GroupCode" = 9) ELSE " " END AS "Attribute 9", CASE WHEN T0."QryGroup10" = 'Y' THEN (SELECT
T9."GroupName" FROM "OCQG" T9 WHERE T9."GroupCode" = 10) ELSE " " END AS "Attribute 10"
FROM "OCRD" T0 LEFT OUTER JOIN "OCPR" T1 ON T0."CardCode" = T1."CardCode" AND
T0."CntctPrsn" = T1."Name" INNER JOIN "OCRG" T4 ON T0."GroupCode" = T4."GroupCode" INNER
JOIN "OLNG" T2 ON T0."LangCode" = T2."Code" LEFT OUTER JOIN "OOND" T5 ON T0."IndustryC" =
T5."IndCode" LEFT OUTER JOIN "CRD1" T3 ON T0."CardCode" = T3."CardCode" AND T0."BillToDef"
= T3."Address" WHERE T0."CardType" = 'C'
```

b) Additional Addresses Data

```
SELECT T0."CardCode", T1."Address", T0."ZipCode", T0."Phone1", T0."Phone2", T0."Fax", T0."Cellular",
T0."City", T0."Country", T0."E_Mail", T0."Building", T0."IntrntSite", T0."StreetNo", T1."Street", T1."State",
T1."AdresType", T1."Address2", T1."Address3", T1."TaxOffice" FROM "OCRD" T0 INNER JOIN "CRD1"
T1 ON T0."CardCode" = T1."CardCode" WHERE T0."CardType" = 'C'
```

c) Address Usages Data

```
SELECT

CASE

WHEN T0."BillToDef" = T1."Address" OR T0."ShipToDef" = T1."Address" THEN 'X'

ELSE "

END AS "Standard",

T1."CardCode",

T1."Address",

T1."AdresType"

FROM "OCRD" T0
```

```
INNER JOIN "CRD1" T1 ON T0."CardCode" = T1."CardCode"
```

```
WHERE T0."CardType" = 'C'
```

d) Sales Data

```
SELECT T0."CardCode", T2."GroupName", T0."Currency", T0."PartDelivr", T0."BackOrder",  
T1."ISIncoterm", T3."PymntGroup" FROM "OCRD" T0 left JOIN CRD9 T1 ON T0."CardCode" =  
T1."CardCode" INNER JOIN OCRG T2 ON T0."GroupCode" = T2."GroupCode" INNER JOIN OCTG T3  
ON T0."GroupNum" = T3."GroupNum" WHERE T0."CardType" = 'C'
```

e) Company Data

```
SELECT T0."CardCode", T0."PaymBlock" FROM OCRD T0 WHERE T0."CardType" = 'C'
```

f) Withholding Tax Data

```
SELECT T0."CardCode", T0."WTCode", T0."WTLiable", T0."CrtfcateNO", T0."ExemptNo", T1."Rate",  
T0."ExpireDate" FROM "OCRD" T0 LEFT JOIN OWHT T1 ON T0."WTCode" = T1."WTCode" LEFT JOIN  
OVTG T2 ON T0."ECVatGroup" = T2."Code" WHERE T0."CardType" = 'C'
```

g) Company Texts Data

SQL Database Query:

```
SELECT T0.[CardCode], T1.[Name], T0.[Free_Text] FROM [dbo].[OCRD] T0 INNER JOIN OLNG T1  
ON T0.[LangCode] = T1.[Code] WHERE T0.[CardType] = 'C' and T0.[Free_Text] is not null and  
CONVERT(NVARCHAR(MAX), T0.[Free_Text]) <> N''
```

HANA Database Query:

```
SELECT T0."CardCode", T1."Name", T0."Free_Text" FROM "OCRD" T0 INNER JOIN "OLNG" T1 ON  
T0."LangCode" = T1."Code" WHERE T0."CardType" = 'C' AND T0."Free_Text" IS NOT NULL AND  
LENGTH(T0."Free_Text") > 0
```

h) Bank Data

```
SELECT T0."CardCode", T0."BankCountr", T0."DflAccount", T0."DflIBAN", CAST(T1."BankCode" AS  
VARCHAR(50)) AS "Bank Code", T1."AcctName" FROM OCRD T0 INNER JOIN DSC1 T1 ON  
T0."HousActKey" = T1."AbsEntry" WHERE T0."CardType" = 'C'
```

i) Industries Data

```
SELECT T0."CardCode", T1."IndName", T1."IndDesc" FROM "OCRD" T0 INNER JOIN "OOND" T1 ON  
T0."IndustryC" = T1."IndCode" WHERE T0."CardType" = 'C'
```

j) Output Tax Data

```
SELECT T0."CardCode", T0."County", T1."Category", T1."Name"
```

```
FROM "OCRD" T0
```

```
INNER JOIN "OVTG" T1 ON T0."ECVatGroup" = T1."Code"
```

```
WHERE T0."CardType" = 'C'
```

k) Tax Numbers Data

```
SELECT T0."CardCode", T1."Category", T0."VatIDNum" FROM "OCRD" T0 INNER JOIN "OVTG" T1 ON  
T0."ECVatGroup" = T1."Code" WHERE T0."CardType" = 'C'
```

l) Identification Numbers Data

```
SELECT T0."CardCode",  
  
CAST(  
CASE  
  
    WHEN T0."LicTradNum" IS NOT NULL THEN T0."LicTradNum"  
  
    ELSE CASE  
  
        WHEN T0."VatIdUnCmp" IS NOT NULL THEN T0."VatIdUnCmp"  
  
        ELSE T0."AddID"  
  
    END  
END AS VARCHAR(50)) AS "LicTradNum"  
  
FROM "OCRD" T0  
  
WHERE T0."CardType" = 'C'
```

m) Contact Person Data

```
SELECT T0."CardCode", CAST(T1."CntctCode" AS VARCHAR(50)) AS "Internal Number", T1."Title",  
T1."FirstName", T1."LastName" AS "Last Name", T1."MiddleName", T1."BirthDate", T1."Position",  
T1."Tel1", T1."Cellolar", T1."Fax", T1."E_Mail"  
  
FROM "OCRD" T0  
  
INNER JOIN "OCPR" T1 ON T0."CardCode" = T1."CardCode"  
  
WHERE T0."CardType" = 'C'
```

2. Export the result of each query in an excel file, thereby generating multiple excel files, that contains data of Customers in different views. Name each of the file as mentioned below. **Make sure that you do not use any other name.**

- a. General Data: *General.xlsx*
- b. Additional Addresses Data: *Additional Addresses.xlsx*
- c. Address Usages Data: *Address Usages.xlsx*
- d. Sales Data: *Sales Data.xlsx*
- e. Company Data: *Company Data.xlsx*
- f. Withholding Tax Data: *Withholding Tax Data.xlsx*
- g. Company Texts Data: *Company Texts.xlsx*
- h. Bank Data: *Bank Data.xlsx*
- i. Industries Data: *Industries.xlsx*
- j. Output Tax Data: *Output Tax.xlsx*
- k. Tax Numbers Data: *Tax Numbers.xlsx*
- l. Identification Numbers Data: *Identification Numbers.xlsx*
- m. Contact Person Data: *Contact Person.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.

- 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(General.xlsx) should look like this:

#	BP Name	BP Code	Type of Business	Bill-to Street	Bill-to Zip Code	Telephone 1	Telephone 2	Fax Number	Mobile Phx	Bill-to City	Bill-to Cou	E-Mail	Foreign
1	PC Welt GmbH & C	20000	C	Goethestr. 24	10625	030/56590		030/56590-2		Berlin	DE	info@pcweltgmbh.s	
2	Tobias Umang	C20003	C	*	*	*		*		*		*	
3	Mikrochips GmbH	C23900	C	Hessische Str. 5	68305	0621/654-76		0621/654-7633		Mannheim	DE	info@mikrochips.sa	
4	Büro Online AG	C25000	C	Ziegelstraße 24	10117	030/383-230		030/383-8000		Berlin	DE	bueroonline.sap.cor	
5	Büro Ausstattung I	C26000	C	Kaiserstraße 174	76133	0721/1300120		0721/13009000		Karlsruhe	DE	banamyslo.sap.de	
6	Computerhandel I	C30000	C	Fuldastieg 3	21079	040/345-100		040/345-9000		Hamburg	DE	info@mueller.sap.de	
7	Büroausstatter Me	C40000	C	Berliner Allee 50	40212	069/632-330		069/632-3399		Düsseldorf	DE	info@bm.sap.net	
8	CIT Beratungshau	C42000	C	Jahnstr. 65	60318	040/115-770		040/115-7733		Frankfurt a	DE	info@cit.sap.de	
9	INTINT, Inc	C50000	C	10 Rayleigh Road	SW19 3RF	(44) 40/456-100		(44) 456-9000		London	GB	info@intint.sap.uk	
10	SG Elektronik	C60000	C	208 Hollywood Av	95030	(1) 351/980-770		(1) 351/980-7723		Los Gatos	US	info@sgelec.sap.co	
11	Broup Inc.	C70000	C	400 Range Road	44113	(1) 711/711-610		(1) 711/711-6124		Cleveland	US	info@broup.sap.cor	
12	Web Einmalkunde	C99998	C								DE		
13	Einmalkunde	C99999	C								DE		
14	D0001	D0001	C								DE		
15	Uwe Mann	L10001	C	Ernst-August-Platz	30159					Hannover	DE		
16	Tom Umak	L10002	C								DE		

- 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.

- Download the iflow for Customer for B1 (provided by SAP).
- Upload the iflow in your SAP Integration Suite system.
- Deploy the integration flow.
- 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](#).

- Set up an application to trigger the integration flow e.g., Postman.
- 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.
- 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.
- 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

Email:

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Support Ticket Component:

CA-S4H-B1-IFLOW