

SAP BUSINESS TECHNOLOGY PLATFORM | EXTERNAL

Integration Guide

SAP Build Process Automation Integration with SAP SuccessFactors and SAP S/4HANA to create Social Security Certificate

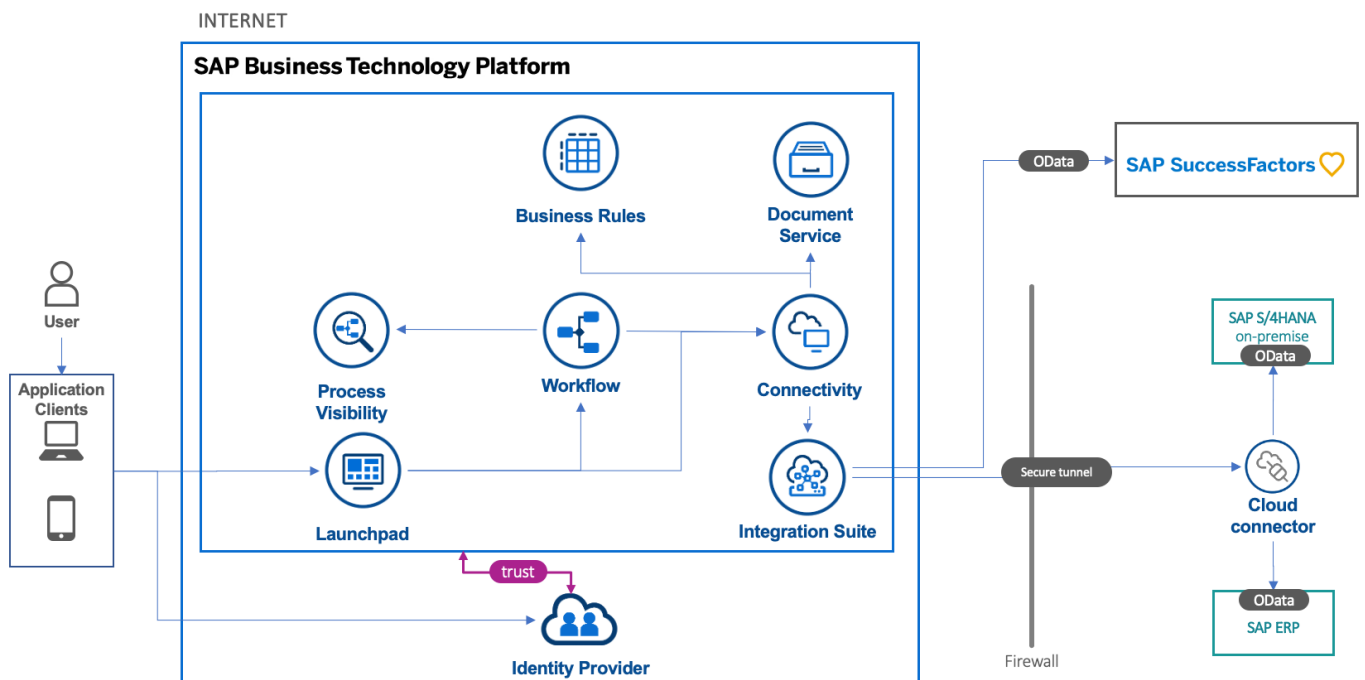
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Overview

This document provides information about configuration steps to setup the integration content to consume the content package SAP Build Process Automation Integration with SAP SuccessFactors and SAP S/4HANA to Create Social Security Certificate. This workflow allows employees to create a request for the Social Security Certificate's form and prerequisite is to get the necessary employee data from SAP SuccessFactors, and then, extract the company data from either SAP S/4HANA or SAP ERP Central Component (ECC).

Solution Diagram



Required SAP Business Technology Platform Services

The content package **SAP Build Process Automation Integration with SAP SuccessFactors and SAP S/4HANA to Create Social Security Certificate** is intended to be used for requesting *Social Security Certificate* for travel purposes and requires the following services in SAP Business Technology Platform.

- SAP Build Process Automation or SAP Workflow Management to orchestrate the process.
- SAP Integration Suite to get the employee and BP data from SAP SuccessFactors or SAP S/4HANA (Cloud or On-Premise).
- SAP Connectivity service (cloud connector) to establish access to SAP S/4HANA on-premise or SAP ERP.
- SAP Cloud Portal service or SAP Launchpad service to access the apps that are involved in the process.
- SAP Business Application Studio to modify the SAPUI5 applications (optional).
- SAP BTP, Cloud Foundry runtime.

Based on your system landscape, the following systems can be integrated to enhance the user experience.

- SAP S/4HANA Version 2021 and above – Read the business partner address data using the standard A_BusinessPartnerAddress API. Then filter out the Business partner based on the BP Role which is configured as a constant header parameter (BusinessPartnerRole).
- SAP ERP Central Component - Read the business partner data from BAPI BAPI_BUPA_SEARCH and BAPI_BUPA_ADDRESS_GETDETAIL
- SuccessFactors – Read the Employee personal, email and address data using the API's (PerPersonal, PerEmail and CompoundEmployee).

Setup and Configuration

This section will explain how to setup the integration content that is required for the workflow content packages **SAP Build Process Automation Integration with SAP SuccessFactors** and **SAP S/4HANA to Create Social Security Certificate**.

(Optional) Configure OData API in SAP ERP

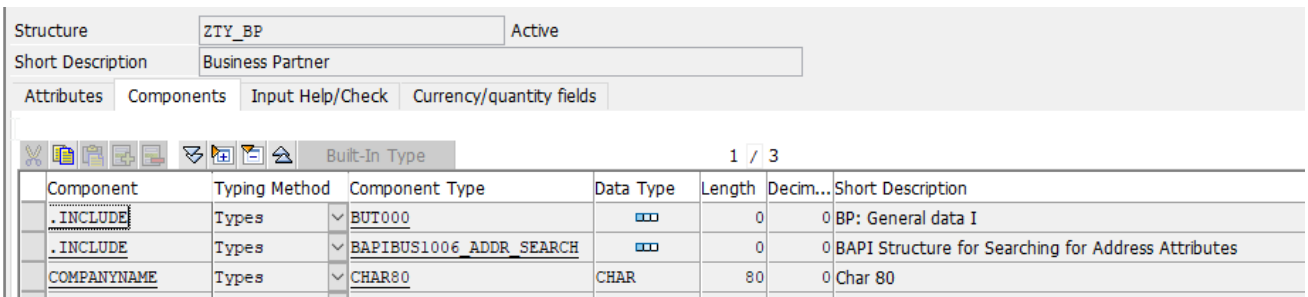
The below configuration is needed only for those customers who need to pull the Business partner data from the SAP ERP Central Component (SAP ECC). If you are already using the SAP S/4HANA then this configuration steps are not needed.

Following custom OData service needed to be configured in SAP ERP to use the content package. Please follow this step to create the SEGW OData service.

Create OData Service

Create Dictionary elements for Service Data Model Entity Type BusinessPartner

- Go to transaction SE11 and Create new Structure ZTY_BP add short Description “Structure for Business Partner”.
- Add includes BUT000 and BAPIBUS1006_ADDR_SEARCH and the component COMPANYNAME.



Component	Typing Method	Component Type	Data Type	Length	Decim...	Short Description
.INCLUDE	Types	BUT000	----	0	0	BP: General data I
.INCLUDE	Types	BAPIBUS1006_ADDR_SEARCH	----	0	0	BAPI Structure for Searching for Address Attributes
COMPANYNAME	Types	CHAR80	CHAR	80	0	Char 80

Component	Type	Component Type
.INCLUDE	Types	BUT000
.INCLUDE	Types	BAPIBUS1006_ADDR_SEARCH
COMPANYNAME	Types	CHAR80

- Create a Table Type ZTYT_BP for the Structure ZTY_BP created before.

Table Type	ZTYT_BP	Active
Short text	Type Table ZTY_BP	
<input type="radio"/> Attributes <input type="radio"/> Line Type <input type="radio"/> Initialization and Access <input type="radio"/> Primary Key <input type="radio"/> Secondary Key		
<input checked="" type="radio"/> Line Type	ZTY_BP	
<input type="radio"/> Predefined Type	Data Type: <input type="text"/> No. of Characters: <input type="text"/> Decimal Places: <input type="text"/>	
<input type="radio"/> Reference type	<input type="radio"/> Referenced Type: <input type="text"/>	
<input type="radio"/> Reference to Predefined Type	Data Type: <input type="text"/> Length: <input type="text"/> Decimal Places: <input type="text"/>	

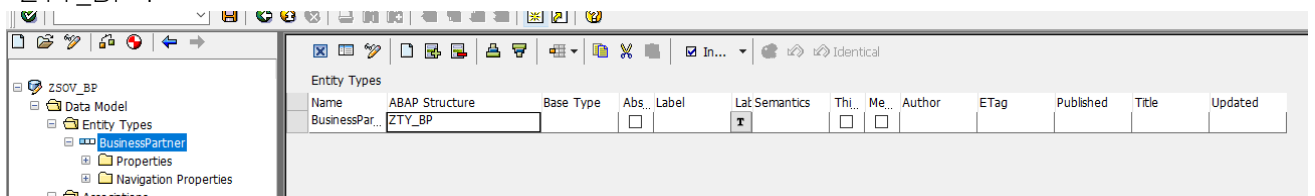
Create Service

- Go to transaction SEGW.
- Create new Project ZSOV_BP with attributes. (Follow this link on how to create a Project).
Project type: "Service SAP Annotations" **Generation Strategy: "Standard"**

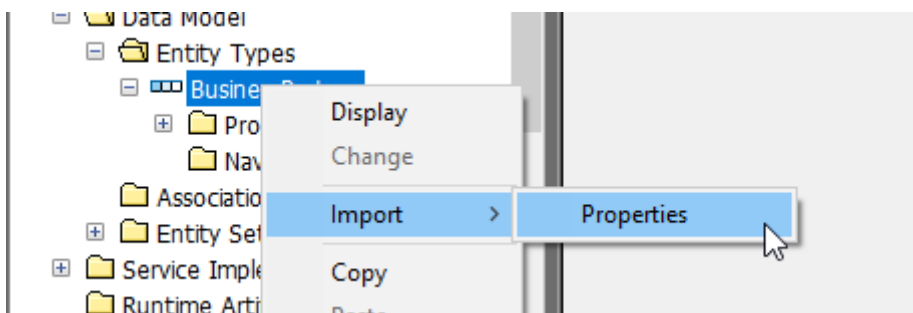
Attributes

Project Type	Service with SAP Annotations
Generation Strategy	Standard

- Add your Package.
- Add New Entity Type "BusinessPartner" with reference to the structure created before "ZTY_BP".



- Right-Click in Entity Type "BusinessPartner" and click in Import->Properties



- Add the fields bellow and click as KEY the Partner field.

Modify Entity Type

Is E...	Complex/Entity Type	ABAP Name	Is K...	Type	Name	Label
<input checked="" type="checkbox"/>	BusinessPartner	PARTNER	<input checked="" type="checkbox"/>	CHAR	Partner	BusinessPartner
<input checked="" type="checkbox"/>	BusinessPartner	NAME_ORG1	<input type="checkbox"/>	CHAR	NameOrg1	Name 1
<input checked="" type="checkbox"/>	BusinessPartner	NAME_ORG2	<input type="checkbox"/>	CHAR	NameOrg2	Name 2
<input checked="" type="checkbox"/>	BusinessPartner	NAME_ORG3	<input type="checkbox"/>	CHAR	NameOrg3	Name 3
<input checked="" type="checkbox"/>	BusinessPartner	NAME_ORG4	<input type="checkbox"/>	CHAR	NameOrg4	Name 4
<input checked="" type="checkbox"/>	BusinessPartner	MC_NAME1	<input type="checkbox"/>	CHAR	McName1	Name 1/Last Nm
<input checked="" type="checkbox"/>	BusinessPartner	MC_NAME2	<input type="checkbox"/>	CHAR	McName2	Name2/First Nme
<input checked="" type="checkbox"/>	BusinessPartner	CITY1	<input type="checkbox"/>	CHAR	City1	City
<input checked="" type="checkbox"/>	BusinessPartner	POSTL_COD1	<input type="checkbox"/>	CHAR	PostlCod1	Postal Code
<input checked="" type="checkbox"/>	BusinessPartner	COUNTRY	<input type="checkbox"/>	CHAR	Country	Country
<input checked="" type="checkbox"/>	BusinessPartner	REGION	<input type="checkbox"/>	CHAR	Region	Region
<input checked="" type="checkbox"/>	BusinessPartner	STREET	<input type="checkbox"/>	CHAR	Street	Street
<input checked="" type="checkbox"/>	BusinessPartner	CITY2	<input type="checkbox"/>	CHAR	City2	District
<input checked="" type="checkbox"/>	BusinessPartner	COMPANYNAME	<input type="checkbox"/>	CHAR	Companyname	Char80

Back Finish Cancel











- Save and click in Generate 





Create Service Handler Class

- Go to transaction SE24.
- Enter object type name as ZCL_ZSOV_BP_APP_BL & Click on create button.
- Click Source Code-Based button to toggle to the source code-based class builder.
- Copy the code for the class from **SAP NOTE 3164551**.
- The class should now have the types, and one method as shown in the screen shot below.
- Save and Activate the class.

Class/Interface **ZCL_ZSOV_BP_APP_BL** Implemented / Active

Properties Interfaces Friends Attributes Methods Events **Types** Aliases

Properties           Filter

Type	Visibility	Typing	Associated...	Description
TY_COMPANYNAME_RANGE	Public			
TY_COUNTRY_RANGE	Public			
TY_CITY1_RANGE	Public			
TY_PARTNER_RANGE	Public			

Class/Interface		ZCL_ZSOV_BP_APP_BL		Implemented / Active													
Properties	Interfaces	Friends	Attributes	Methods	Events	Types	Aliases										
<div style="display: flex; justify-content: space-between; align-items: center;"> Parameters Exceptions Sourcecode Properties + - ✂ 📄 📁 🔍 🔍 📄 🔄 ☑ </div> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Method</th> <th>Level</th> <th>Visibility</th> <th>M...</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>GET_BPS_LIST</td> <td>Instance Method</td> <td>Public</td> <td></td> <td>Get BPs</td> </tr> </tbody> </table>								Method	Level	Visibility	M...	Description	GET_BPS_LIST	Instance Method	Public		Get BPs
Method	Level	Visibility	M...	Description													
GET_BPS_LIST	Instance Method	Public		Get BPs													

Redefine method in Service Class ZCL_ZSOV_BP_DPC_EXT

- After generating the oData Service and the Service Handler Class created, go to transaction SE24 and open class ZCL_ZSOV_BP_DPC_EXT.
- Click Source Code-Based button to toggle to the source code-based class builder.
- Redefine Method BUSINESSPARTNERS_GET_ENTITYSET.
- Copy the Source Code from the SAP Note 3164551.

Parameters of Method							BUSINESSPARTNERS_GET_ENTITYSET	
← Methods							Sourcecode	
Parameter	Type	P..	Optional	Typing Method	Associated Type			
IV_ENTITY_NAME	Importing	<input type="checkbox"/>	<input type="checkbox"/>	Type	STRING			
IV_ENTITY_SET_NAME	Importing	<input type="checkbox"/>	<input type="checkbox"/>	Type	STRING			
IV_SOURCE_NAME	Importing	<input type="checkbox"/>	<input type="checkbox"/>	Type	STRING			
IT_FILTER_SELECT_OPTIONS	Importing	<input type="checkbox"/>	<input type="checkbox"/>	Type	/IWBEP/T_MGW_SELECT_OPTION			
IS_PAGING	Importing	<input type="checkbox"/>	<input type="checkbox"/>	Type	/IWBEP/S_MGW_PAGING			
IT_KEY_TAB	Importing	<input type="checkbox"/>	<input type="checkbox"/>	Type	/IWBEP/T_MGW_NAME_VALUE_PAIR			
IT_NAVIGATION_PATH	Importing	<input type="checkbox"/>	<input type="checkbox"/>	Type	/IWBEP/T_MGW_NAVIGATION_PATH			
IT_ORDER	Importing	<input type="checkbox"/>	<input type="checkbox"/>	Type	/IWBEP/T_MGW_SORTING_ORDER			
IV_FILTER_STRING	Importing	<input type="checkbox"/>	<input type="checkbox"/>	Type	STRING			
IV_SEARCH_STRING	Importing	<input type="checkbox"/>	<input type="checkbox"/>	Type	STRING			
IO_TECH_REQUEST_CONTEXT	Importing	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Type Ref To	/IWBEP/IF_MGW_REQ_ENTITYSET			
ET_ENTITYSET	Exporting	<input type="checkbox"/>	<input type="checkbox"/>	Type	ZCL_ZSOV_BP_MPC=>TT_BUSINESSSP...			
ES_RESPONSE_CONTEXT	Exporting	<input type="checkbox"/>	<input type="checkbox"/>	Type	/IWBEP/IF_MGW_APPL_SRV_RUNTIM...			

Register OData Service

1. Go to t-code "SICF".
2. Go to path: default_host/sap/opu/odata/sap/zsov_bp_srv.
3. Activate the service.

Follow this [link](#) on how to activate the SICF related service for the odata.

Path	/default_host/sap/opu/odata/sap/	
Service Name	zsov_bp_srv	Service (Active) Altern. Name: zsov_bp_srv
Lang.	English	→ Other Languages
Description		
Description 1	ZSOV_BP_SRV	
Description 2		
Description 3		

Register OData Services in SAP Gateway

1. Go to t-code “/IWFND/MAINT_SERVICE”.
2. Click on “Add Service”
3. Select the required System Alias (Select LOCAL as system alias in case of Embedded Deployment of Gateway)
4. Enter Technical Service Name as “ZSOV_BP_SRV” and click on “Get Services”
5. Select “ZSOV_BP_SRV” and click on “Add Selected Services”
6. Enter the required package and click on OK.

Import, configure and deploy cloud integration content

This workflow content requires the cloud integration to process the – Treasury Payment Request in SAP S/4HANA. The integration content package SAP Build Process Automation Integration with SAP SuccessFactors and SAP S/4HANA to Create Social Security Certificate is available in SAP API Business hub to integrate SAP Build Process Automation or SAP Workflow Management with SAP SuccessFactors and SAP S/4HANA(Cloud or OnPremise). Integration models use Odata service to integrate with SAP ERP central component.

The following integration models are available in this package

1. CompanyDataQuery

Retrieve Company Business Partner data from either SAP S/4HANA or SAP ECC.

2. EmployeeAddressQuery

Retrieve the Employee address data from the SAP SuccessFactors.

3. EmployeeEmailIDQuery

Retrieve the Employee email data from the SAP SuccessFactors.

4. EmployeeFirstNameLastNameQuery

Retrieve the Employee personal data from the SAP SuccessFactors.

Import the integration package to your SAP Cloud Integration tenant. To be able to import and deploy integration flows, you need the role AuthGroup.IntegrationDeveloper (in Neo environment) or PI_Integration_Developer (in cloud foundry environment) assigned in your tenant.

Import pre-packaged Integration content in SAP Integration Suite

- Access your SAP Integration Suite tenant management node (<https://<integrationtenant>/itspaces>).
- View all pre-packaged integration flow under Discover->Integration. (<https://<integrationtenant>/itspaces/shell/discover>)
- Search content package “SAP Build Process Automation Integration with SAP SuccessFactors and SAP S/4HANA to Create Social Security Certificate”.
- Click on the package “SAP Build Process Automation Integration with SAP SuccessFactors and SAP S/4HANA to Create Social Security Certificate”.
- Click Copy to import the Integration content package to your workspace.

Deploy Credentials

- Navigate to the *Monitor* view (<https://<integrationtenant>/itspaces/shell/monitoring>) to setup the security materials required for the package.
- Deploy the following credentials using the *Security Material* app.
 - **S4HANA** – (User Credentials) To call the Business partner APIs in SAP S/4HANA. Make sure that the user has the relevant communication scenarios as mentioned in section Configure SAP S/4HANA Communication User.

Name	User Credential Name
Type	“User Credentials”
User	SAP S/4HANA Communication User ID
Password	SAP S/4HANA Communication User Password

- **ECC** – (User Credentials) To call the Business partner APIs in SAP ECC.

Name	User Credential Name
Type	“User Credentials”
User	SAP ECC User ID

Password	SAP ECC User Password
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- o **SuccessFactors** – (User Credentials) To call the Employee APIs in SAP SuccessFactors.

Name	User Credential Name
Type	"SuccessFactors"
User	SAP SuccessFactors User ID
Password	SAP SuccessFactors User Password
Company ID	SAP SuccessFactors Company ID

- Similarly, configure the other integration model and deploy them.

Note: The credential names can be different from what is mentioned above. Make sure that you configure the appropriate credential names in the integration flow's HTTP adapter configuration.

Configure Adapters

SAP SuccessFactors Adapter Configuration

- Open the integration model EmployeeAddressQuery.
- Click Configure button, choose receiver "SAP_SuccessFactors" and set the required destination name

Name	Default Value
SFSF_EC_BASE_URL	https://<SFSF_EC_API_URL>
SFSF_EC_LOGON_CREDENTIALS_NAME	SFSF_EC_CREDENTIALS

SFSF_EC_BASE_URL	SAP SuccessFactors API endpoint URL server. Please check here for details.
SFSF_EC_LOGON_CREDENTIALS_NAME	SAP SuccessFactors logon credentials from <i>Security Material</i>

- Deploy the integration model.
- Configure similar parameters for other Integration models EmployeeEmailIDQuery and EmployeeFirstLastNameQuery.

SAP S/4HANA HTTP Adapter Configuration

Open the integration model CompanyDataQuery.

- Click Configure button, choose adaptor type “OData” and set the required destination name with “On-Premise” proxy type.

Name	Default Value
CloudCC_LocationID	CloudCC_LocationID
SAP_ECC_Credentials	SAP_ECC_CREDENTIAL
SAP_ECC_URL	SAP_ECC.url

CloudCC_LocationID	“locationID”, only if configured in the Cloud connector Setup.
SAP_ECC_CREDENTIAL	SAP S/4HANA On-Premise Credentials configured in <i>Security Material</i>
SAP_ECC.url	<Host><Port>/sap/opu/odata/SAP/ZSOV_BP_SRV/

- Deploy all the integration models.