SAP BUSINESS TECHNOLOGY PLATFORM | EXTERNAL

Integration Guide

SAP Build Process Automation Integration with SAP S/4HANA for Disconnection

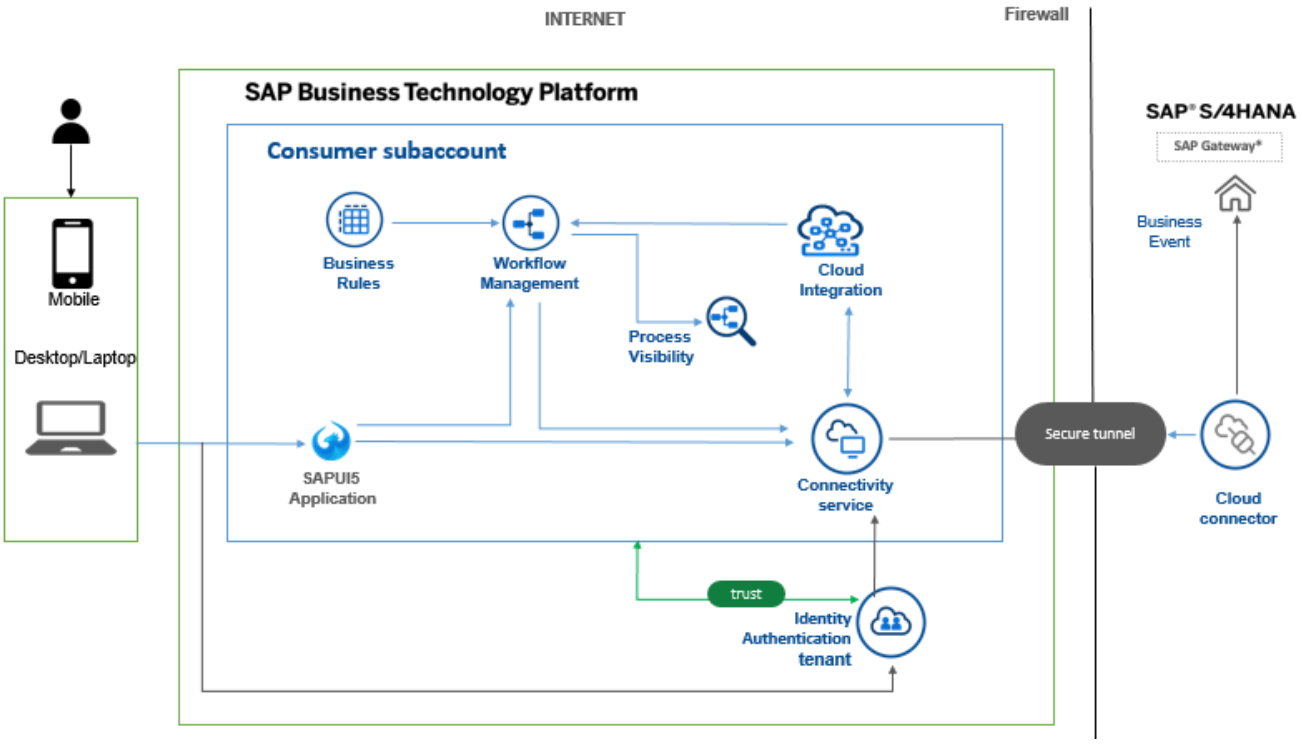
THE BEST RUN SAP

Contents

Overview

The live process content Disconnection Process allows the user to Create Service Request for De-Energisation or disconnection in SAP S/4HANA (IS U-CM) and Create/Release Disconnection Document, Disconnection order and Disconnection activity and enter the meter reading into the disconnection document.

This document provides information to setup the integration between SAP Build Process Automation or SAP Workflow Management with SAP S/4HANA for Disconnection Process. The main audience of this document are technical IT/system administrators.



Required SAP BTP Services

The live process content package Disconnection Process is intended to be used for SAP S/4HANA and requires the following services in SAP Business Technology Platform. SAP Business Technology Platform.

- SAP Build Process Automation or SAP Workflow Management to orchestrate the process.
- Cloud Integration capability within SAP Integration Suite
- SAP Connectivity service (cloud connector) to establish access to SAP S/4HANA (on-premise).
- SAP Cloud Portal service or SAP Launchpad service to access the apps that are involved in the process.
- SAP Cloud Identity Services - Identity Authentication (optional).
- SAP Business Application Studio to modify/deploy the SAPUI5 applications.
- SAP BTP, Cloud Foundry runtime.

Setup and Configuration

This section will explain how to setup the integration content that is required for the live process content packages for Disconnection Process.

Configure SAP S/4HANA Destination

Configure a HTTP destination to connect with SAP S/4HANA on-premise or SAP S/4HANA Cloud, refer to documentation here for the same. The below is a destination configuration for SAP S/4HANA on-premise.

Name	S4HANA_RFC or <OR any name, but make sure that the destination name is used in the integration model configuration>
Type	RFC
Proxy Type	OnPremise
Description	
User	<TECHNICAL_USER>
Password	<PASSWORD>
Authentication	BasicAuthentication
Additional Properties	Name: jco.client.ashost Value: <abapServerHost> Name: jco.client.client Value: <client id> Name: jco.client.sysnr Value: <systemNumber>

Configure Cloud Connector

For SAP S/4HANA on-premise landscape, configure cloud connector to enable secure tunnel to SAP BTP tenant for RFC calls. Please refer the help documentation to configure Cloud Connector.

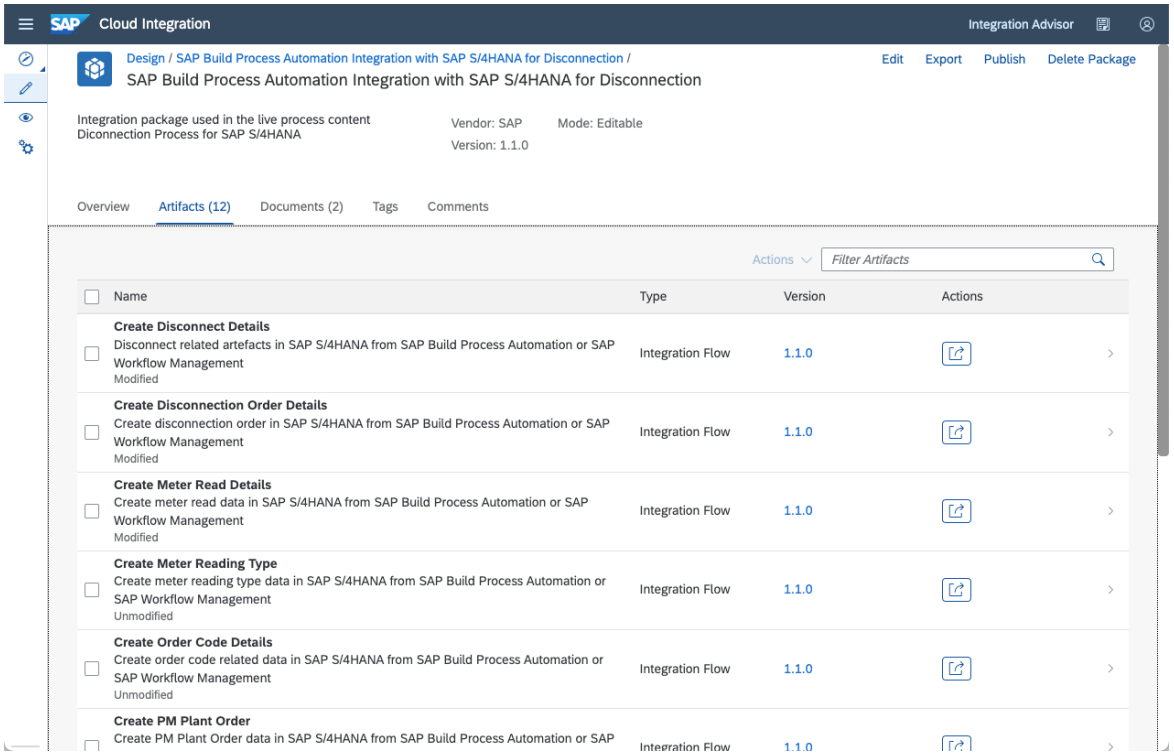
Services that need to be exposed from SAP S/4HANA on-premise using Cloud Connector

Class Name	Object	Method	Template name	Rest service
ZCL_REST_INSTL	Installation	GET	/ISUDM_Installation_REST	/zdiscdoc/ISUDM_Installation_REST?sap-client=<client_id>&<INSTLN='<installation_number>'>
ZCL_REST_DISCON	DisconnectionDocument	GET	/ISUDM_ disconnect_REST	/zdiscdoc/ISUDM_ disconnect_REST?sap-client=200<client_id>&<DISCNO='<disconnection_document>'>
ZCL_REST_DISCON	DisconnectionDocument	PUT	/ISUDM_ disconnect_REST	/zdisconnect/ISUDM_ disconnect_REST?sap-client=<client_id>
ZCL_REST_DISCON	DisconnectionDocument	POST	/ISUDM_ disconnect_REST	/zdisconnect/ISUDM_ disconnect_REST?sap-client=<client_id>
ZCL_REST_DISORD	DisconnectionOrder	POST	/ISUDM_ discord_REST	/zdisconnect/ISUDM_ discord_REST?sap-client=<client_id>
ZCL_REST_DISORD	DisconnectionOrder	GET	/ISUDM_ discord_REST	/zdisconnect/ISUDM_ discord_REST?sap-client=<client_id>&<Order_num>
ZCL_REST_DISORD	DisconnectionOrder	PUT	/ISUDM_ discord_REST	/zdisconnect/ISUDM_ discord_REST?sap-client=<client_id>&<Order_num>
ZCL_REST_MR	MeterReads	GET	/ISUDM_meterread_REST	/zdiscdoc/ISUDM_meterread_REST?sap-client=<client_id>&<MR='<Meter_reading_number'>
ZCL_REST_MR	MeterReads	POST	/ISUDM_meterread_REST	/zdiscdoc/ISUDM_meterread_REST?sap-client=<client_id>

Note: There are multiple custom function modules, class and services which needs to be exposed in the cloud connector. The names provided here are default name or placeholders. Depending on the names used during the implementation, corresponding services shall be used in cloud connector

Import, Configure and deploy Integration Content

To create the De-Energization in SAP S/4HANA, we need to call an RFC function module through Integration Flow. Also, for few of the F4 help on the UI5 side few Integration Flows are designed to export the values from the table.



Import the content 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 integration package SAP Build Process Automation Integration with SAP S/4HANA for Disconnection
- Click on the package SAP Build Process Automation Integration with SAP S/4HANA for Disconnection
- Click Copy to import the Integration content package to your workspace

Configure and deploy integration content

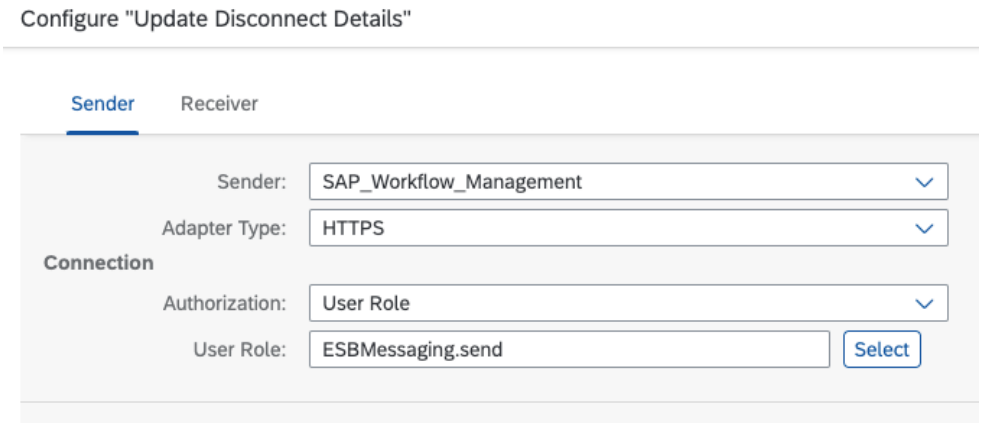
- Navigate to the Monitor view (https://<integrationtenant> /itspaces/shell/monitoring) to setup the security materials required for the package.
- Deploy the following credentials using the Security Material app.

  S4HANA – (User Credentials) To call the OData APIs exposed from SAP S/4HANA.

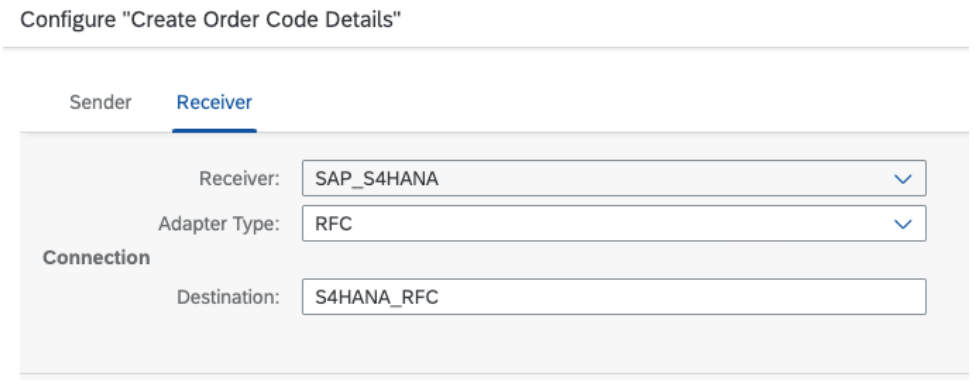
- Navigate to Design to open the imported content package.

- Open all Integration models to configure

- Click Configure button, choose the appropriate sender, and set their respective User Role credentials

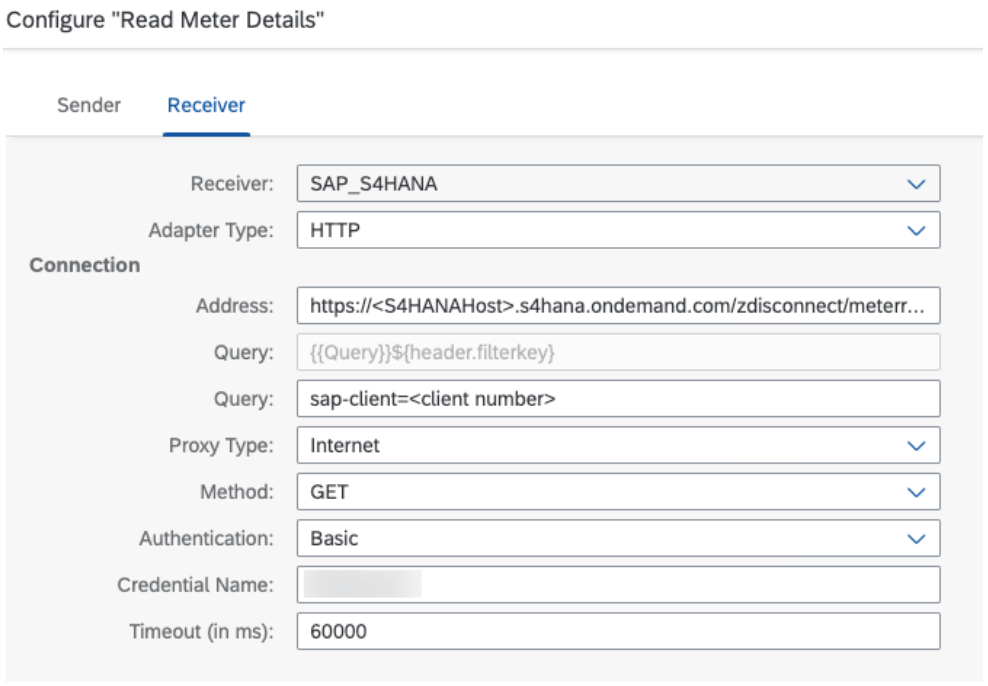


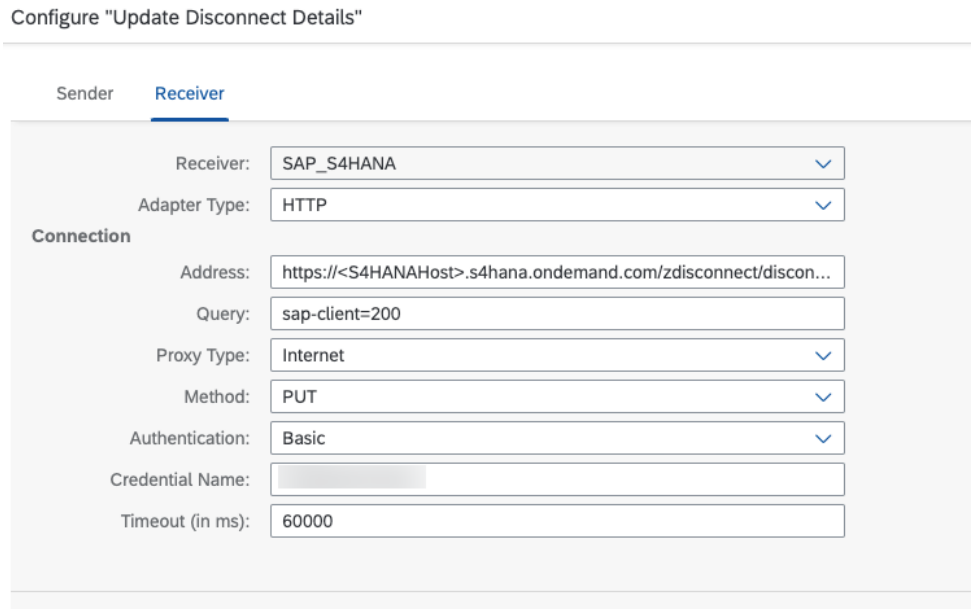
- Click Configure button, choose the appropriate receiver and respective RFC destination (example, S4HANA_RFC) name.



- Perform this configuration for RFC adapters in ALL integration models in this package.

- For the HTTP adapters, perform the following configuration. Pay attention to the Query parameter in the Connection section. The service with GET Method has an additional property added automatically.





- Deploy all integration models.

Determine Plant Based Approver from External Service

Disconnection process content package have the flexibility to determine approver either via Plant or Connection Object. Based on the step attribute configured in the process variant, it can either Plant or Connection Object.

Based on the Service on the Service request type for the request approver can be determined either via Business Rules or via External Service. If the Service request type is ZSR approver will be determined by Business rules, for all other cases it should be configured via External Service.

In case of approver determined via plant for any service other than ZSR, external service should be configured with following details

API Attributes	Values
Path	/http/DeEnergization/comsapcontentPlantApprover
HTTP Method	POST

Payload sent by workflow (sample data)	{
	“Vocabulary”: [
	{
	“DisconnectionRequest”: {
	“RequestType”:”ZSR”,
	"Plant": "1000"
	}
	}
	]
	}

Response Payload from integration flow	{
	“Result”:[
	{
	“PlantBasedApprover”:{
	“MailID”: “abc@email.com”,
	“UnitOfTime”: < “H” OR “m” OR “Y” OR “M” OR “D” >,
	“UserID”: <User Id> ,
	“Duration”: ,
	“UserGroup” :<User Group>
	}
	}
	]
	}
	Note: When Status is not 200, then it is considered a failed service call.

Payload Type	Application / JSON

Determine Connection Object Based Approver from External Service

Disconnection process content package have the flexibility to determine approver either via Plant or Connection Object. Based on the step attribute configured in the process variant, it can either Plant or Connection Object.

Based on the Service on the Service request type for the request approver can be determined either via Business Rules or via External Service. If the Service request type is ZSR approver will be determined by Business rules, for all other cases it should be configured via External Service.

In case of approver determined via Connection Object for any service other than ZSR, external service should be configured with following details

API Attributes	**Values**
Path	/http/DeEnergization/comsapcontentConObjApprover
HTTP Method	POST

Payload sent by workflow (sample data)	{
	“Vocabulary”: [
	{
	“DisconnectionRequest”: {
	“RequestType”:”ZSR”,
	"ConnectionObject": "1000000075"
	}
	}
	]
	}

Response Payload from integration flow	{
	“Result”: [
	{
	“ConnectionObjectBasedApprover”: {
	“MailID”: “abc@email.com”,
	“UnitOfTime”: < “H” OR “m” OR “Y” OR “M” OR “D” >,
	“UserID”: <User Id>,
	“Duration”: ,
	“UserGroup” : <User Group>
	}
	}
	]
	}
	Note: When Status is not 200, then it is considered a failed service call.

Payload Type	Application / JSON