

SAP BUSINESS TECHNOLOGY PLATFORM | EXTERNAL

# Integration Guide

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

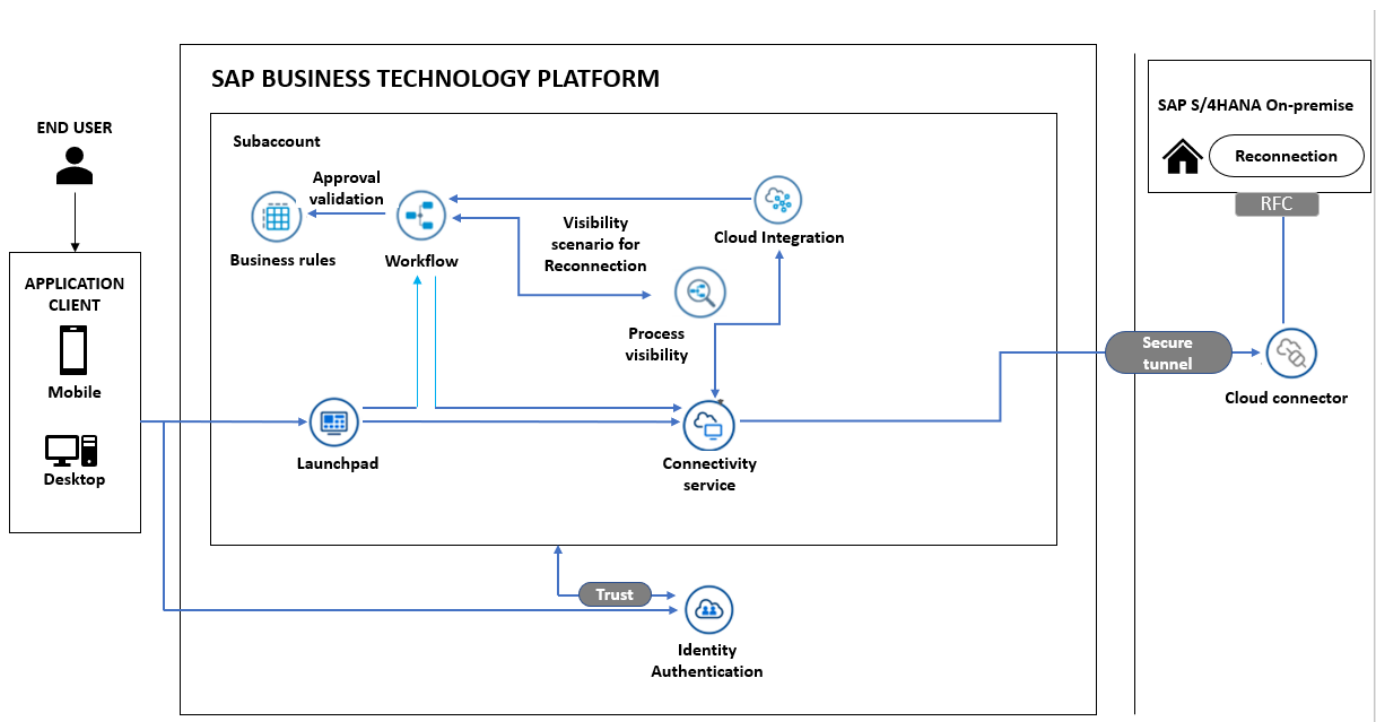
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# Overview

The live process content Reconnection Process allows the user to Create Service Request for Reconnection which was disconnected in SAP S/4HANA (IS U-CM) and Create/Release Reconnection order and Reconnection activity and enter the meter reading into the reconnection order and complete the disconnection document as well.

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



## Required SAP BTP Services

The live process content package Reconnection 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 Reconnection Process.

## Configure RFC 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 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](#).

Expose the Following BAPI/RFC in the SAP Cloud Connector:

- TH\_GET\_VRT\_HOST\_DATA
- RFC\_READ\_TABLE - This RFC is used in the integration flow to fetch F4 values for UI fields- Field Service request type, Order Code, Meter Reading Type etc.

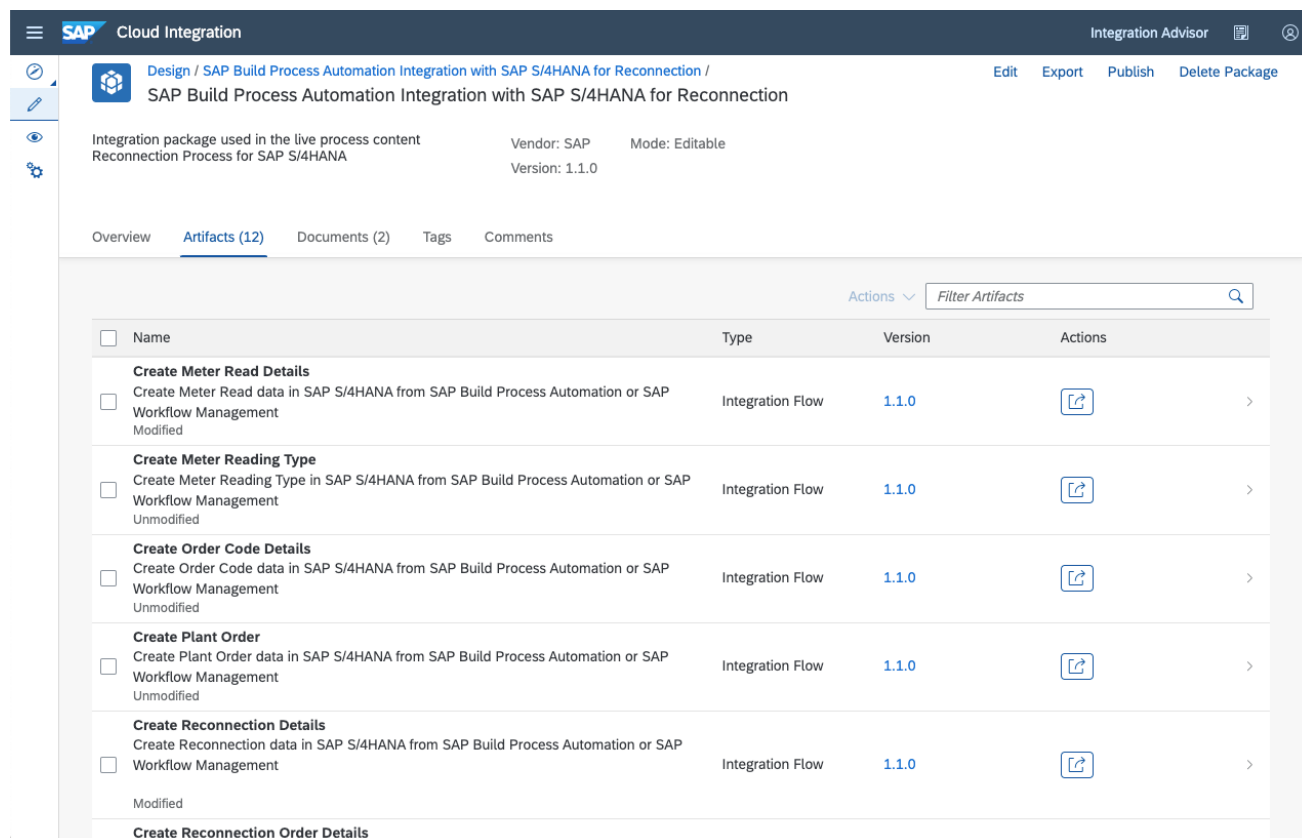
Services that need to be exposed from SAP S/4HANA using Cloud Connector:

Note: There are custom 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

Rest Service	End Point Url	Protocol	Backend System
Read Installation Details	/zreconnect/Installation?sap-client=<SAP client>&bp=<BusinessPartner>	HTTPS	ABAP System
Create Reconnection Order Details	/zreconnect/reconnectionOrder?sap-client=<SAP client>	HTTPS	ABAP System
Read Meter Details	/zreconnect/meterread?sap-client=<SAP client>&discon=<DiscoDocNumber>&instl=<InstallationNo>	HTTPS	ABAP System
Create Meter Reads	zreconnect/meterread?sap-client=<SAP client>	HTTPS	ABAP System
Retrieve Project URL for Re-energization	ReEnergization/buildPSURL	HTTPS	ABAP System
updated Disconnection Order Details	/zreconnect/reconnectionOrder?sap-client=<SAP client>	HTTPS	ABAP System

# Import, Configure and deploy Integration Content

To create the Reconnection 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 Reconnection
- Click on the package SAP Build Process Automation Integration with SAP S/4HANA for Reconnection.
- Click Copy to import the Integration content package to your workspace

- 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 section in the integration tenant to open the imported content package.
- Open all Integration models, select Configure
- For the sender set their respective User Role credentials or leave it as default values.

#### Configure "Create Meter Reading Type"

The screenshot shows the configuration interface for the 'Sender' side of the integration. The 'Sender' tab is active. The configuration includes:

- Sender:** SAP\_Workflow\_Management
- Adapter Type:** HTTPS
- Authorization:** User Role
- User Role:** ESBMessaging.send (with a 'Select' button)
- CSRF Protected:**

- For RFC adapters, set configured value as RFC Destination created in the section Configure SAP S/4HANA Destination of this document.

#### Configure "Create Meter Reading Type"

The screenshot shows the configuration interface for the 'Receiver' side of the integration. The 'Receiver' tab is active. The configuration includes:

- Receiver:** SAP\_S4HANA
- Adapter Type:** RFC
- Destination:** S4HANA\_RFC
- Send Confirm Transaction:**
- Create New Connection:**

- For HTTP adapters configure the SAP S/4HANA OData host, port, SAP Client (in query) & credentials.



Sender    **Receiver**

---

Receiver:

Adapter Type:

**Connection**

Address:

Query:

Proxy Type:

Method:

Authentication:

Credential Name:

Timeout (in ms):

- Deploy all integration models.

## Determine Plant Based Approver from External Service

Reconnection 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 ZER 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 ZER ,external service should be configured with following details

API Attributes	Values
Path	/http/ReEnergization/comsapcontentPlantApprover
HTTP Method	POST
Payload sent by workflow (sample data)	<pre>{   "Vocabulary": [     {       "EnergizationRequest": {         "RequestType": "ZER",         "Plant": "1000"       }     }   ] }</pre>

	}
Response Payload from integration flow	<pre> {   "Result":[     {       "PlantBasedApprover":{         "MailID": "abc@email.com",         "UnitOfTime": &lt; "H" OR "m" OR "Y" OR "M" OR "D" &gt;,         "UserID":&lt;User Id&gt; ,         "Duration": ,         "UserGroup" :&lt;User Group&gt;       }     }   ] } </pre> <p>Note: When Status is not 200, then it is considered a failed service call.</p>
Payload Type	Application / JSON

## Determine Connection Object Based Approver from External Service

Reconnection 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 particular request approver can be determined either via Business Rules or via External Service. If the Service request type is ZER 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 ZER, external service should be configured with following details

API Attributes	Values
Path	/http/ReEnergization/comsapcontentConObjApprover
HTTP Method	POST
Payload sent by workflow (sample data)	<pre> {   "Vocabulary": [     {       "EnergizationRequest": {         "RequestType": "ZER", </pre>

	<pre> "ConnectionObject": "1000000075"     }   } ] } </pre>
Response Payload from integration flow	<pre> {   "Result": [     {       "ConnectionObjectBasedApprover": {         "MailID": "abc@email.com",         "UnitOfTime": &lt;"H" OR "m" OR "Y" OR "M" OR "D" &gt;,         "UserID": &lt;User Id&gt;,         "Duration": ,         "UserGroup" : &lt;User Group&gt;       }     }   ] } </pre> <p>Note: When Status is not 200, then it is considered a failed service call.</p>
Payload Type	Application / JSON

## Retrieve Project URL for Reconnection

API Attributes	Values
Path	/http/ReEnergization/buildPSURL
HTTP Method	POST
Payload sent (sample data)	{ "instl":"3000000018" }
Response Payload from integration flow	{ "URL": " <a href="https://&lt;host&gt;:&lt;port&gt;/sap/bc/gui/sap/its/webgui?~transaction=*OLR3_CJ20N_OLR3_R3_TS_SEL_OBJ-PSPID=3000000018">https://&lt;host&gt;:&lt;port&gt;/sap/bc/gui/sap/its/webgui?~transaction=*OLR3_CJ20N_OLR3_R3_TS_SEL_OBJ-PSPID=3000000018</a> " }
Payload Type	Application / JSON