

SAP BUSINESS TECHNOLOGY PLATFORM | EXTERNAL

Integration Guide

SAP S/4HANA Integration with SAP Workflow
Management – Sales Order

Table of Contents

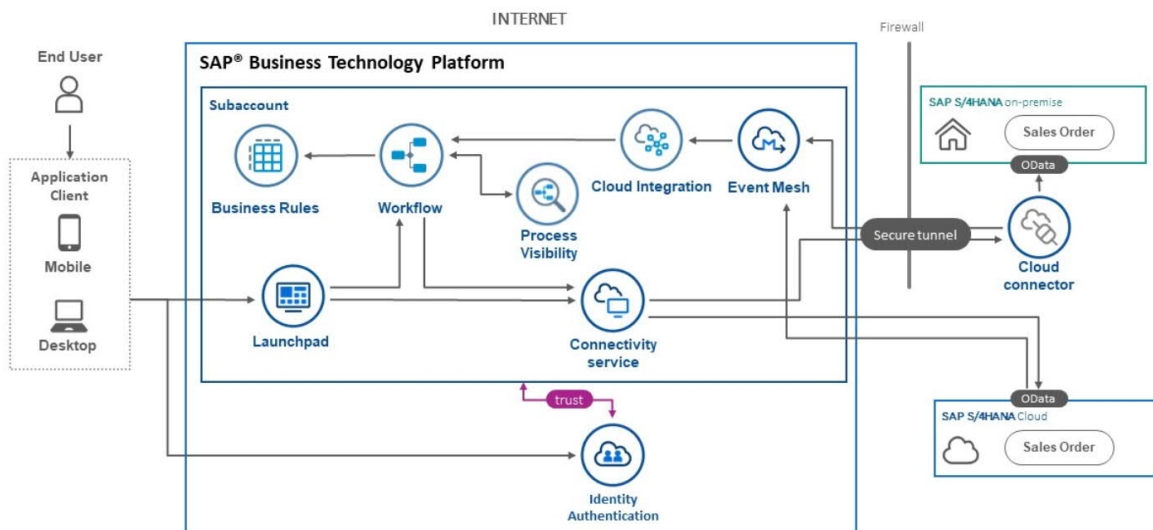
Table of Contents	2
Overview	3
Required SAP Business Technology Platform Services	4
Setup and Configuration	5
Configure SAP S/4HANA Communication User	5
Configure SAP S/4HANA to push Sales Order Events to SAP Event Mesh	5
Configure SAP S/4HANA Destination	6
[Optional] Configure Cloud Connector.....	6
Import, configure and deploy cloud integration content.....	6
Import pre-packaged Integration content in SAP Integration Suite	7
HTTP Adapter Configuration (Push Sales Order Created/Changed/Deleted Event).....	9
HTTP Adapter Configuration (Get Description Text)	11
HTTP Adapter Configuration (Remove Delivery and Billing Blocks from Sales Order Header).....	12

Overview

This document provides information about configuration steps to setup the integration content to consume the workflow content packages **Manage Sales Order, Manage Credit Block on Sales Order, Manage Delivery and Billing Block on Sales Order**. The primary audience of this document is integration administrators and developers.

The Manage Sales Order content package for SAP S/4HANA (on-premise and cloud) enables to automate sales order approvals in a flexible and transparent way. Manage Credit/Delivery/Billing Block on Sales Order content package enables customers to automate the process of releasing the Credit/Delivery/Billing Block on Sales Order in SAP S/4HANA. Salient features of these content packages are:

- Plug and Play with SAP S/4HANA (on-premise and cloud) without any additional development.
- Pre-configured process steps to create new variants.
- New Process variants can be configured in a low-code, no-code approach.
- Add additional approvers before the releasing or rejecting sales order in SAP S/4HANA.
- Agent/approver determination using Business Rules or external service.
- Flexibility in determining process variants based on business conditions.
- Perform additional business validation of Sales Orders using business rules capability of SAP Workflow Management.
- Pre-built integration content to push Sales Order lifecycle events on to Process Visibility Service through the Event Mesh configuration.
- Out-of-the-box visibility into key process performance indicators.



Required SAP Business Technology Platform Services

The workflow content packages **Manage Sales Order, Manage Credit Block on Sales Order, Manage Delivery and Billing Block in Sales Order** is intended to be used for SAP S/4HANA (on-premise and cloud) and requires the following services in SAP BTP:

- SAP Workflow Management to orchestrate the process.
- SAP Integration Suite to push Sales Order lifecycle events on to Process Visibility Service. Sales Order lifecycle events are pushed from SAP S/4HANA to Business Technology Platform through the Event Mesh configuration
- 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 workflow content packages for managing Sales Order.

Configure SAP S/4HANA Communication User

In order to call the APIs related to Sales Order (approvals and release credit block), the following communication scenarios shall be enabled for the communication user.

- SAP_COM_0109
Inbound Service: /sap/opu/odata/sap/API_SALES_ORDER_SRV

Enable the following scenarios only if you are using the Manage Credit Block on Sales Order scenario.

- SAP_COM_0325 –
Inbound Service:
/sap/opu/odata/sap/API_SLS_DOC_WITH_CREDIT_BLOCK
- SAP_COM_087
Inbound Services:
/sap/opu/odata/sap/API_DIVISION_SRV
/sap/opu/odata/sap/API_DISTRIBUTIONCHANNEL_SRV
/sap/opu/odata/sap/API_SALESORGANIZATION_SRV
- SAP_COM_0106
Inbound Service:
/sap/opu/odata/sap/API_SLS_DOC_WITH_CREDIT_BLOCK
- SAP_COM_0564
Inbound Service:
/sap/opu/odata/sap/API_SALES_DOCUMENT_REASON_SRV

Configure SAP S/4HANA to push Sales Order Events to SAP Event Mesh

SAP Event Mesh can receive events from SAP S/4HANA (on-premise/cloud). Use the following blogs to perform the necessary configuration.

SAP S/4HANA on-premise

<https://blogs.sap.com/2019/09/16/sap-enterprise-messaging-for-s4hana-on-premises/>

SAP S/4HANA cloud

<https://blogs.sap.com/2020/08/19/sap-s-4hana-cloud-enterprise-event-enablement-whats-new-with-cloud-2008/>

The following business events are required for the Sales Order packages:

1. /sap/s4/beh/salesorder/v1/SalesOrder/Created/v1
2. /sap/s4/beh/salesorder/v1/SalesOrder/Changed/v1
3. /sap/s4/beh/salesorder/v1/SalesOrder/Deleted/v1

Note: At the end of this configuration, you will have the sales order events from SAP S/4HANA (on-premise or cloud) available in the queue created using SAP Event Mesh.

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 for *SAP S/4HANA Cloud*.

Name	S4HANA
Type	HTTP
Proxy Type	Internet
User	<COMMUNICATION_USER>
Password	<COMMUNICATION_PASSWORD>
Authentication	BasicAuthentication
URL	<OData URL of SAP S/4HANA System>
Additional Properties	sap-client: <client number>

[Optional] Configure Cloud Connector

For SAP S/4HANA on-premise landscape, configure cloud connector to enable secure tunnel to SAP BTP tenant. Please refer the help documentation to [configure Cloud Connector](#).

Import, configure and deploy cloud integration content

This workflow content requires the cloud integration to process the sales order in SAP S/4HANA.

The integration content package SAP S/4HANA Integration with SAP Workflow Management – Sales Order is available in SAP API Business hub to integrate SAP Workflow Management with SAP S/4HANA. Integration models use OData APIs to integrate with SAP S/4HANA. The following integration models are available in this package.

1. Push Sales Order Created Event
2. Push Sales Order Changed Event
3. Push Sales Order Deleted Event
4. Remove Delivery and Billing Blocks from Sales Order Header
5. Get Description Text

Design / SAP S/4HANA Integration with SAP Workflow Management – Sales Order /

SAP S/4HANA Integration with SAP Workflow Management – Sales Order

Vendor: Mode: Editable
 Version:

This package contains Integration Flows to push Sales Order events from SAP S/4HANA to SAP Workflow Management.

Overview
Artifacts (5)
Documents
Tags
Comments

	Name	Type	Version	Actions ▼
<input type="checkbox"/>	Get Description Text			
<input type="checkbox"/>	Push Sales Order Customer Group Description Text to SAP Workflow Management <small>Created</small>	Integration Flow	1.0.0	
<input type="checkbox"/>	Push Sales Order Changed Event			
<input type="checkbox"/>	Push Sales Order Changed event from S/4HANA to SAP Workflow Management <small>Created</small>	Integration Flow	1.1.0	
<input type="checkbox"/>	Push Sales Order Created Event			
<input type="checkbox"/>	Push Sales Order Created event from S/4HANA to SAP Workflow Management <small>Created</small>	Integration Flow	1.1.0	
<input type="checkbox"/>	Push Sales Order Deleted Event			
<input type="checkbox"/>	Push Sales Order Deleted event from S/4HANA to SAP Workflow Management <small>Created</small>	Integration Flow	1.1.0	
<input type="checkbox"/>	Remove Delivery and Billing Blocks from Sales Order Header			
<input type="checkbox"/>	Removing Delivery and Billing Block Reasons from Sales Order Header in SAP S/4HANA and sends confirmation back to Workflow Management <small>Created</small>	Integration Flow	1.0.0	

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 S/4HANA Integration with SAP Workflow Management – Sales Order**”.

- Click on the package SAP S/4HANA Integration with SAP Workflow Management – Sales Order.
- 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.

- **VISIBILITY** – (OAuth2 Client Credentials) To push sales order events to process visibility capability of SAP Workflow Management. ([help documentation to determine the service configuration parameters](#))

- **Workflow** – (OAuth2 Client Credentials) To start the approval workflows in SAP Workflow Management ([help documentation to determine the service configuration parameters](#)). Make sure that the workflow service instance was created with the following scopes - WORKFLOW_INSTANCE_GET, WORKFLOW_INSTANCE_START, WORKFLOW_INSTANCE_CANCEL.

- **S4HANA** – (User Credentials) To call the sales order 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.

Edit User Credentials

Name: * S4HANA

Description: For Sales order workflow packages

Type: * User Credentials

User: *

Password: *

Repeat Password: *

Deploy Cancel

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.

HTTP Adapter Configuration (Push Sales Order Created/Changed/Deleted Event)

- Open the integration model *Push Sales Order Created Event*.
- Click **Configure** button, choose the appropriate receivers (workflow, process visibility or SAP S/4HANA) and set their respective API endpoint and credential names.

Configure "Push Sales Order Created Event"

Receiver More

Receiver: SAP_ProcessVisibilityService

Adapter Type: HTTP

Connection

Address: https://{processVisibility_url}/pv-service/rest/v1/data-acquisition/d...

processVisibility_url: bpmpvruntime.hana.ondemand.com

Credential Name: VISIBILITY

Save Deploy Close

Configure "Push Sales Order Created Event"

Receiver More

Receiver: CreateUnblockCredit

Adapter Type: HTTP

Connection

Address: https://{workflowManagement_url}/workflow-service/rest/v1/workfl...

workflowManagement_url: api.workflow-sap.hana.ondemand.com

Credential Name: Workflow

Save Deploy Close

Configure "Push Sales Order Created Event"

Receiver More

Receiver: SAP_S4HANA

Adapter Type: HTTP

Connection

Address: https://({s4hana_url})/sap/opu/odata/sap/API_SALES_ORDER_SRV/...

s4hana_url: api.s4hana.ondemand.com

Credential Name: S4HANA

Save Deploy Close

Go to the **More** tab and configure additional parameters:

- BillingBlockScenario - – Set this to **Yes**, if you are going to use the Billing block Workflow in **Manage Delivery and Billing Block in Sales Order** workflow package. Otherwise, set it to **No**
- CreditBlockScenario – Set this to **Yes**, if you are going to use the **Manage Credit Block on Sales Order** workflow package. Otherwise, set it to **No**.
- DeliveryBlockScenario - – Set this to **Yes**, if you are going to use the Delivery block Workflow in **Manage Delivery and Billing Block in Sales Order** workflow package. Otherwise, set it to **No**
- ManageSalesOrder – Set this to **Yes**, if you are going to use the **Manage Sales Order** workflow package. Otherwise, set it to **No**.
- SalesOrderApprovalReasons – This parameter is relevant when using Manage Sales Order workflow package to enable external approvals for the Sales Order. Maintain a list of 'comma-separated' Sales Order Approval Reasons as configured in SAP S/4HANA, which requires an approval workflow in SAP BTP.

Configure "Push Sales Order Created Event"

Receiver **More**

Type: All Parameters

BillingBlockScenario: Yes

CreditBlockScenario: Yes

DeliveryBlockScenario: Yes

ManageSalesOrder: Yes

SalesOrderApprovalReasons: APPROVAL, REASONS, COMMA, SEPERATED

- Deploy the integration model.

- Similarly, configure the *Push Sales Order Changed Event*, *Push Sales Order Deleted Event* (Manage Sales Order, Credit/Delivery/Billing Block) integration models and deploy them.

HTTP Adapter Configuration (Get Description Text)

- Open the integration model Get Description text.
- Click **Configure** button, choose the appropriate receiver (SAP S/4HANA) and set respective API endpoint and credential name.

Configure "Get Description Text"

Receiver

Connection

Receiver: SAP_S4HANA

Adapter Type: HCIOData

Address: https://{{S4hostname}}/sap/opu/odata/sap/YY1_SALESORDERHEADER_CDS

S4hostname: [REDACTED]

Credential Name: [REDACTED]

Go to the **More** tab and configure additional parameters:

- For Type "Integration Flow" Set desired HTTP Session reuse Parameter as "None" or "On Exchange" or "On Integration Flow".

Configure "Get Description Text"

Receiver **More**

Runtime Configuration

Type: Integration Flow

Name [ID]: Get Description Text [Collobaration_1]

HTTP Session Reuse: None

- Deploy the integration model.

HTTP Adapter Configuration (Remove Delivery and Billing Blocks from Sales Order Header)

- Open the integration model Remove Delivery and Billing Blocks from Sales Order Header.
- Click **Configure** button, choose the appropriate receivers (workflow, process visibility or SAP S/4HANA) and set their respective API endpoint and credential names.

Configure "Remove Delivery and Billing Blocks from Sales Order Header"

Receiver

Connection

Receiver:	S4HANA
Adapter Type:	HTTP
Address:	https://{{Address}}/sap/opu/odata/sap/API_SALES_ORDER_SRV/A_SalesOrder("\${prop...)
Address:	[REDACTED]
Credential Name:	[REDACTED]
Timeout (in ms):	60000

Go to the **More** tab and configure additional parameters:

- For Type "Integration Flow" Set desired HTTP Session reuse Parameter as "None" or "On Exchange" or "On Integration Flow".

Configure "Remove Delivery and Billing Blocks from Sales Order Header"

Receiver **More**

Runtime Configuration

Type:	Integration Flow
Name [ID]:	Remove Delivery and Billing Blocks from Sales Order Header [Collobaration_1]
HTTP Session Reuse:	On Integration Flow

- Deploy the integration model.