

SAP BUSINESS TECHNOLOGY PLATFORM | EXTERNAL

# Setup Guide

## Plant Maintenance Order Date Change Notification

# Table of Contents

<b>Table of Contents .....</b>	<b>2</b>
<b>Overview .....</b>	<b>3</b>
<b>Required SAP BTP Services.....</b>	<b>4</b>
<b>Setup and Configuration.....</b>	<b>5</b>
Configure SAP Workflow Management.....	5
Configure Workflow Email Destination .....	5
Configure Workflow Destination.....	5
Configure Business Rules Destination .....	6
Configure Destination Configuration Destination .....	6
Configure OAuth2 Client Credentials Workflow Destination (Service Instance).....	7
Configure Cloud Integration Destination .....	8
Configure Communication Scenarios in SAP S/4HANA .....	13
Configure SAP S/4HANA Destination.....	14
Configure Custom CDS View Destination .....	14
Configure Cloud Connector .....	15
Configure Custom CDS View in SAP S/4HANA.....	<b>Error! Bookmark not defined.</b>
MaintOrderOperationData .....	<b>Error! Bookmark not defined.</b>
MaintenanceOrder .....	<b>Error! Bookmark not defined.</b>
Configure SAP S/4HANA to push Purchase Order Events to SAP Event Mesh .....	16
Import, Configure and deploy Integration Content .....	<b>Error! Bookmark not defined.</b>
Whitelist of BAPI in SAP S/4HANA.....	18
Customizing Steps for Scheduling of Maintenance Orders .....	18

# Overview

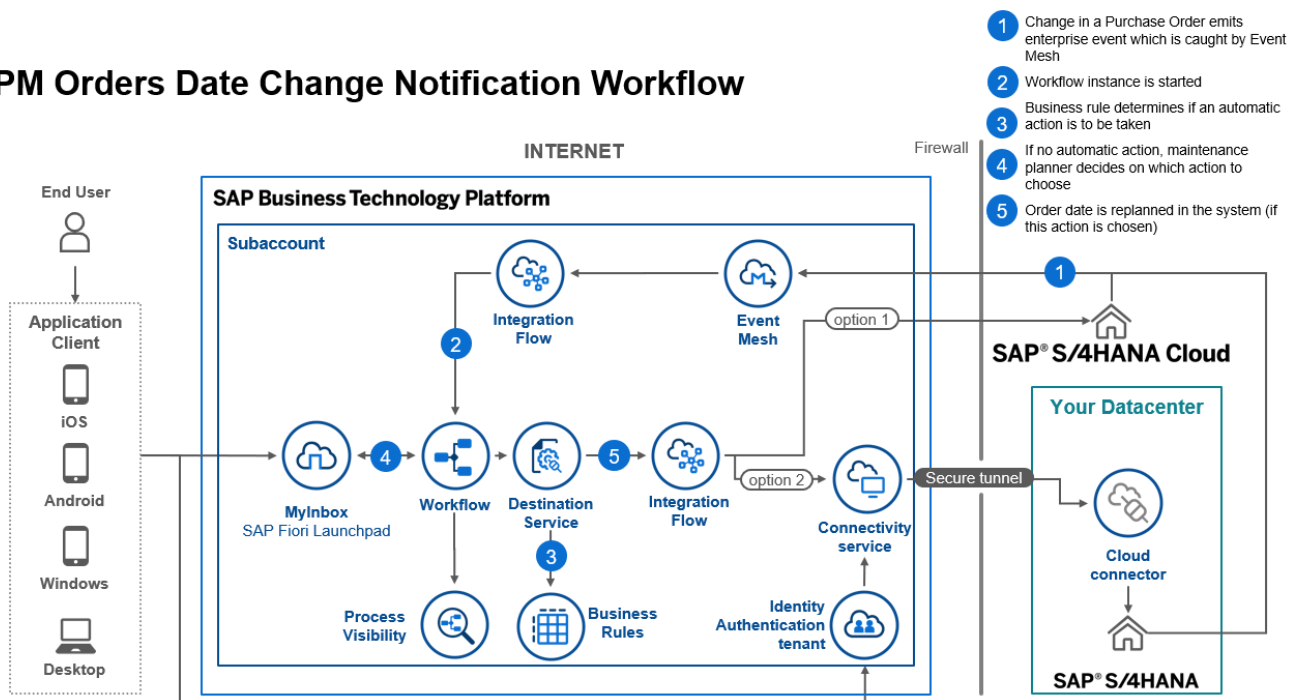
This document provides information about setting up the SAP Business Technology Platform account to consume the workflow content package **Plant Maintenance Order Date Change Notification**. The main audience of this document are technical IT/system administrators.

This scenario enables maintenance planners to react to delays in the delivery of components required for plant maintenance orders. When an update to a purchase order or an associated document occurs, the workflow checks if there is a scheduling conflict (e.g., delivery date of vendor confirmation for a component is later than the start date of the maintenance order). In case of a conflict the maintenance planner is informed and can decide between the following actions: They can replan the maintenance order to a later date, can request a supplier change by a procurement responsible or can choose to just accept the delay.

This package includes the following features:

- React to changes to the Purchase Order with event-based integration with Event Mesh
- Automatic determination of procurement responsible based on Responsibility Management
- Automatic replanning of the maintenance order based on the availability date of the parts taking into account the material goods receipt duration

## PM Orders Date Change Notification Workflow



## Required SAP BTP Services

The workflow content package **Plant Maintenance Order Date Change Notification** is intended to be used for Service Applications in SAP S/4HANA (both SAP S/4HANA Cloud and SAP S/4HANA) and requires the following services in SAP Business Technology Platform.

- SAP Workflow Management to orchestrate the process.
- SAP Integration Suite to push Purchase Order lifecycle events on to Process Visibility Service.
- 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 Destination Service to define the targets of the connections from the Workflow

# Setup and Configuration

## Configure SAP Workflow Management

**Plant Maintenance Order Date Change Notification** content package requires SAP Workflow Management subscription or a CPEA contract. Follow the setup and configuration section of SAP Workflow Management.

<https://help.sap.com/viewer/6f55baaf330443bd8132d071581bbae6/Cloud/en-US/d7910e2bf7f64afc9d0eb21b0cc9e84d.html>

Note: While creating the service instance for Workflow service, make sure that at least the following scopes are assigned (help documentation to [enable technical authentication](#) to access the workflow APIs). If the scopes are not assigned, you can also [update the service instance](#) with the following scopes.

- TASK\_GET
- TASK\_UPDATE
- TASK\_COMPLETE
- TASK\_GET\_CONTEXT
- WORKFLOW\_INSTANCE\_GET
- WORKFLOW\_INSTANCE\_START
- WORKFLOW\_INSTANCES\_UPDATE
- WORKFLOW\_INSTANCE\_CANCEL
- MESSAGE\_SEND

## Configure Workflow Email Destination

Configure workflow email destination to automatically send email notification to the involved parties. For more information on configuring the destination, see [configure workflow email destination](#)

## Configure Workflow Destination

A HTTP destination is required in the BTP subaccount where SAP Workflow Management is subscribed. Create a destination with name “Workflow” with the following configuration, if it doesn’t exist already. Please refer how to [create a HTTP destination](#) OAuth 2.0 Authentication (client credentials).

Name	Workflow
Type	HTTP
Proxy Type	Internet
Authentication	OAuth2ClientCredentials
URL	<rest_api_url>

Client ID	<client ID>
Client Secret	<client secret>
Token Service URL	<uaa.url>/oauth/token

## Configure Business Rules Destination

A HTTP destination is required in the Cloud Foundry account where SAP Workflow Management is subscribed. Create a destination with name “BUSINESS\_RULES” with the following configuration, if it doesn’t exist already. Please refer how to [create a HTTP destination](#) and [how to access business rules APIs](#) using OAuth 2.0 Authentication (client credentials)

Name	BUSINESS_RULES
Type	HTTP
Proxy Type	Internet
Authentication	OAuth2ClientCredentials
URL	<rule_runtime_url>/rules-service
Client ID	<client ID>
Client Secret	<client secret>
Token Service URL	<uaa.url>/oauth/token

## Configure Destination Configuration Destination

A HTTP destination is required in the Cloud Foundry account where SAP Workflow Management is subscribed. Create a destination with name “destination-read” with the following configuration, if it doesn’t exist already. Please refer how to [create a HTTP destination](#).

Take the OAuth details from a destination service instance in your subaccount

This destination is used to read the configuration of the destination pointing to SAP S/4HANA, returning the sap-client parameter to the workflow instance so that it can added to the request URLs.

Name	destination-read
Type	HTTP
Proxy Type	Internet
Authentication	OAuth2ClientCredentials
URL	https://destination-configuration.cfapps.<YOURDATACENTER>.hana.ondemand.com/destination-configuration/v1/destinations/
Client ID	<client ID>
Client Secret	<client secret>

Token Service URL	<uaa.url>/oauth/token
-------------------	-----------------------

## Configure OAuth2 Client Credentials Workflow Destination (Service Instance)

Similarly, create new Destination to call Workflow Service APIs using a Service route from SAP UI5 Component. For more details, follow the official help document:

<https://help.sap.com/viewer/cca91383641e40ffbe03bdc78f00f681/Cloud/en-US/685f383cebb54c009b2fac633b32c90f.html>

## Configure Cloud Integration Destination

To call an integration flow, a HTTP destination is required in the SAP BTP tenant where the SAP Workflow Management is subscribed. Create a destination called CPI with either Basic Authentication or OAuth2ClientCredentials.

### Destination with Basic Authentication

Name	CPI
Type	HTTP
Proxy Type	Internet
Authentication	Basic Authentication
URL	<runtime.url>
Username	<user>
Password	<password>

### Destination with OAuth2ClientCredentials Authentication

Name	CPI
Type	HTTP
Proxy Type	Internet
Authentication	OAuth2ClientCredentials
URL	<runtime.url>
Client Id	<client ID>
Client Secret	<client secret>
Token Service URL	<oauth.url.for.clientCredentials>

To get the OAuth credentials in Neo environment, create a new OAuth client in the CPI subaccount for the CPI service.

### Additional Properties to Destination

Additionally, add the following properties in the destination for cloud integration.

WebIDEnabled	true
WebIDESystem	CPI
WebIDEUsage	odata_gen



# Configure Custom CDS View in SAP S/4HANA

MaintOrderOperationData

Open the Fiori Launchpad of your SAP S/4HANA or SAP S/4HANA Cloud system  
Open the AppFinder.

Search in category "All" for the App "Custom CDS Views"

Open "Custom CDS Views"

Create a new CDS View

Enter "MaintOrderOperationData" as the label and select "Standard CDS View" as the Scenario

Create the View

Go into the view and in section "Data Sources", add a new Primary Data Source

Select I\_MaintOrderOperationData as the Data Source

Add an Associated Data Source I\_WorkCenter

Click on Join Condition button for I\_WorkCenter

Add a Join condition as shown below:

Data Source Details				
Name:	Alias:	Type:	Cardinality:	
I_WorkCenter	_I_WorkCenter	Associated Datasource	Zero or More [0..*]	
Join Condition (1)				Add Delete
<input type="checkbox"/> Data Source Field	Type	Operator	Value Type	Value
<input type="checkbox"/> WorkCenter	CHAR (8)	Equal	Field	I_MaintOrderOperationData.WorkCenter

Go to section "Elements"

Add the elements as shown below

Key	Alias	Path
X	MaintenanceOrder	I_MaintOrderOperationData.MaintenanceOrder
X	MaintOrderOperationCounter	I_MaintOrderOperationData.MaintOrderOperationCounter
	MaintOrderRoutingNumber	I_MaintOrderOperationData.MaintOrderRoutingNumber
	FunctionalLocation	I_MaintOrderOperationData.FunctionalLocation
	Equipment	I_MaintOrderOperationData.Equipment
	Assembly	I_MaintOrderOperationData.Assembly
	MaintenanceActivityType	I_MaintOrderOperationData.MaintenanceActivityType
	MaintenancePlannerGroup	I_MaintOrderOperationData.MaintenancePlannerGroup
	MaintenancePlanningPlant	I_MaintOrderOperationData.MaintenancePlanningPlant
	OperationDescription	I_MaintOrderOperationData.OperationDescription
	OperationControlKey	I_MaintOrderOperationData.OperationControlKey

OperationPersonResponsible	I_MaintOrderOperationData.OperationPersonResponsible
MaintenanceOrderSubOperation	I_MaintOrderOperationData.MaintenanceOrderSubOperation
MaintenanceOrderOperation	I_MaintOrderOperationData.MaintenanceOrderOperation
MaintObjectLocAcctAssgmtNbr	I_MaintOrderOperationData.MaintObjectLocAcctAssgmtNbr
MaintenancePlant	I_MaintOrderOperationData.MaintenancePlant
MaintenanceOrderType	I_MaintOrderOperationData.MaintenanceOrderType
CostCtrActivityType	I_MaintOrderOperationData.CostCtrActivityType
OperationAssembly	I_MaintOrderOperationData.OperationAssembly
OperationQuantityUnit	I_MaintOrderOperationData.OperationQuantityUnit
OperationQuantity	I_MaintOrderOperationData.OperationQuantity
ConfirmationTotalQuantity	I_MaintOrderOperationData.ConfirmationTotalQuantity
OperationPlannedWorkUnit	I_MaintOrderOperationData.OperationPlannedWorkUnit
OperationPlannedWork	I_MaintOrderOperationData.OperationPlannedWork
WorkCenterPlant	I_MaintOrderOperationData.WorkCenterPlant
WorkCenter	I_MaintOrderOperationData.WorkCenter
MaintOrderOperationInternalID	I_MaintOrderOperationData.MaintOrderOperationInternalID
MaintOrderConfirmation	I_MaintOrderOperationData.MaintOrderConfirmation
LastChangeDateTime	I_MaintOrderOperationData.LastChangeDateTime
CreationDate	I_MaintOrderOperationData.CreationDate
IsDeleted	I_MaintOrderOperationData.IsDeleted
PurchaseRequisition	I_MaintOrderOperationData.PurchaseRequisition
OperationUnloadingPointName	I_MaintOrderOperationData.OperationUnloadingPointName
MaterialGroup	I_MaintOrderOperationData.MaterialGroup
CostElement	I_MaintOrderOperationData.CostElement
OperationWorkCenterTypeCode	I_MaintOrderOperationData.OperationWorkCenterTypeCode
OperationWorkCenterInternalID	I_MaintOrderOperationData.OperationWorkCenterInternalID
SuperiorOperationInternalID	I_MaintOrderOperationData.SuperiorOperationInternalID
OperationPersonResponsibleEmail	I_MaintOrderOperationData._PersonResponsible._BusinessUser._WorkplaceAddress.DefaultEmailAddress
_PlannedWorkUnitOfMeasure	I_MaintOrderOperationData._PlannedWorkUnitOfMeasure
_PersonResponsible	I_MaintOrderOperationData._PersonResponsible
_OperationQtyUnitOfMeasure	I_MaintOrderOperationData._OperationQtyUnitOfMeasure
_LocationAccountAssignment	I_MaintOrderOperationData._LocationAccountAssignment
_Equipment	I_MaintOrderOperationData._Equipment
_I_WorkCenter	_I_WorkCenter

Publish your view

MaintenanceOrder

Open the Fiori Launchpad of your SAP S/4HANA system  
Open the AppFinder

Search in category "All" for the App "Custom CDS Views"

Open "Custom CDS Views"

Create a new CDS View

Enter "ServConAmount" as the label, "ZZ1\_MaintenanceOrder as Name", and select "External API" as the Scenario

Create the View

Go into the view and in section "Data Sources", add a new Primary Data Source

Select I\_Order as the Data Source

Add an Associated Data Source I\_PurReqnAcctAssgmtAPI01  
Click on Join Condition button for I\_PurReqnAcctAssgmtAPI01  
Add a Join condition as shown below:

Data Source Details

Name: I\_PurReqnAcctAssgmtAPI01      Alias: \* \_I\_PurReqnAcctAssgmt      Type: Associated Datasource      Cardinality: Zero or More [0..\*]

Join Condition (1)      Add      Delete

Data Source Field	Type	Operator	Value Type	Value
<input type="checkbox"/> OrderID	CHAR (12)	Equal	Field	I_Order.OrderID

Close

Add an Associated Data Source ZZ1\_MaintOrderOperationData (YY1 instead of ZZ1 if it is a SAP S/4HANA Cloud system)

Click on Join Condition button for ZZ1\_MaintOrderOperationData  
 Add a Join condition as shown below:

Data Source Details

Name: ZZ1\_MaintOrderOperationDat      Alias: \*       Type: Associated Datasource      Cardinality:

Join Condition (1)  Add Delete

<input type="checkbox"/>	Data Source Field	Type	Operator	Value Type	Value
<input type="checkbox"/>	MaintenanceOrder	CHAR (12)	<input type="text" value="Equal"/>	<input type="text" value="Field"/>	<input type="text" value="I_Order.OrderID"/>

Go to section "Elements"

Add the elements as shown in the screenshot

Elements (9)

Representative Key:  Add Delete

<input type="checkbox"/>	Key	Alias	Type	Path	Label	Calculation	Status
<input type="checkbox"/>	<input checked="" type="radio"/> ON	<input type="text" value="OrderID"/>	CHAR (12)	I_Order.OrderID	<input type="text" value="Order"/>		
<input type="checkbox"/>	<input type="radio"/> OFF	<input type="text" value="OrderCategory"/>	NUMC (2)	I_Order.OrderCategory	<input type="text" value="Order Category"/>		
<input type="checkbox"/>	<input type="radio"/> OFF	<input type="text" value="OrderType"/>	CHAR (4)	I_Order.OrderType	<input type="text" value="Order Type"/>		
<input type="checkbox"/>	<input type="radio"/> OFF	<input type="text" value="OrderInternalID"/>	NUMC (10)	I_Order.OrderInternalID	<input type="text" value="Order Internal ID"/>		
<input type="checkbox"/>	<input type="radio"/> OFF	<input type="text" value="OrderDescription"/>	CHAR (40)	I_Order.OrderDescription	<input type="text" value="Order Description"/>		
<input type="checkbox"/>	<input type="radio"/> OFF	<input type="text" value="Plant"/>	CHAR (4)	I_Order.Plant	<input type="text" value="Plant"/>		
<input type="checkbox"/>	<input type="radio"/> OFF	<input type="text" value="PurchaseRequisition"/>	CHAR (10)	_I_PurReqnAcctAssgmt.PurchaseRequisition	<input type="text" value="Purchase Requisition"/>		
<input type="checkbox"/>	<input type="radio"/> OFF	<input type="text" value="PurchaseRequisitionItem"/>	NUMC (5)	_I_PurReqnAcctAssgmt.PurchaseRequisitionItem	<input type="text" value="Item of requisition"/>		
<input type="checkbox"/>	<input type="radio"/> OFF	<input type="text" value="_ZZ1_MaintOrderOperationData"/>	Association	_ZZ1_MaintOrderOperationData	<input type="text" value="_ZZ1_MaintOrderOperationData"/>		

In section "Next steps", follow the instructions to create a Communication Scenario + Communication Arrangement and assign it to your destination user.

## Configure Communication Scenarios in SAP S/4HANA

Following Communication Scenarios are needed to be configured in SAP S/4HANA or SAP S/4HANA Cloud to use the content package:

SAP\_COM\_0344 (BAPI\_ALM\_ORDER\_MAINTAIN)  
SAP\_COM\_0053 (API\_PURCHASEORDER\_PROCESS)  
SAP\_COM\_0102 (API\_PURCHASEREQ\_PROCESS)  
SAP\_COM\_0112 (API\_RESERVATION\_DOCUMENT)  
SAP\_COM\_0008 (API\_BUSINESS PARTNER)\*\*  
SAP\_COM\_0560 (API\_RESPYMGMT\_TEAM) \*\*\*  
ZZ1\_MAINTENANCEORDER / YY1\_MAINTENANCEORDER\*\*\*\*

Please follow the instructions [here](#) to configure your communication scenarios.

*\* If prompted, enter a Logical System in your respective Communication System that is the same as the Business System*

*\*\* Notes on SAP\_COM\_0008:*

*As we are only using Inbound Services, you don't have to give most data for the Outbound Services. If you set the Outbound Services to Inactive, you don't need to set data there. Just remove the checkmarks next to Active in all the Outbound Services.*

*Outbound communication user can also be set to any value. To be able to select a user, you need to create an entry in Users for Outbound Communication in your assigned communication system. You can set authentication to User ID and Password and just give arbitrary values.*

*Make sure to also set a Business System in your assigned communication system.*

*\*\*\* Follow the instructions [here](#) to configure the scenario*

*\*\*\*\* Custom CDS views needs to be created first*

Inbound Services consumed:

/sap/opu/odata/sap/C\_SUPPLIER\_FS\_SRV  
/sap/opu/odata4/sap/api\_respymgmt\_team\_srv  
/sap/opu/odata/sap/API\_BUSINESS\_PARTNER  
/sap/opu/odata/sap/API\_RESERVATION\_DOCUMENT\_SRV  
/sap/opu/odata/sap/API\_PURCHASEORDER\_PROCESS\_SRV  
/sap/opu/odata/sap/API\_PURCHASEREQ\_PROCESS\_SRV  
/sap/opu/odata/sap/ZZ1\_MAINTENANCEORDER\_CDS (SAP S/4HANA) or  
/sap/opu/odata/sap/YY1\_MAINTENANCEORDER\_CDS (SAP S/4HANA Cloud)

Follow the documentation on how to [Create Communication Arrangement](#) for the Communication scenarios.

## 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 base URL of SAP S/4HANA (Cloud)>
Additional Properties	sap-client: <client number>

## Configure Custom CDS View Destination

A HTTP destination is required in the Cloud Foundry account where SAP Workflow Management is subscribed. Create a destination with name “S4HANA\_PmOrdDcNtf\_MaintenanceOrder” with the following configuration, if it doesn’t exist already. Please refer how to [create a HTTP destination](#).

Destination to SAP S/4HANA Cloud system:

Name	S4HANA_PmOrdDcNtf_MaintenanceOrder
Type	HTTP
Proxy Type	Internet
Authentication	BasicAuthentication
URL	<OData base URL of SAP S/4HANA Cloud> /sap/opu/odata/sap/YY1_MAINTENANCEORDER_CDS/YY1_MaintenanceOrder
User	<COMMUNICATION_USER>
Password	<COMMUNICATION_PASSWORD>

Name	S4HANA_PmOrdDcNtf_VendorConfirmation
Type	HTTP
Proxy Type	Internet
Authentication	BasicAuthentication
URL	<OData base URL of SAP S/4HANA Cloud> /sap/opu/odata/sap/YY1_VENDORCONFIRMATION_CDS /YY1_VendorConfirmation

User	<COMMUNICATION_USER>
Password	<COMMUNICATION_PASSWORD>

Destination to SAP S/4HANA system:

Name	S4HANA_PmOrdDcNtf_VendorConfirmation
Type	HTTP
Proxy Type	OnPremise
Authentication	BasicAuthentication
URL	<Virtual hostname of exposed SAP S/4HANA> /sap/opu/odata/sap/ZZ1_MAINTENANCEORDER_CDS/ZZ1_MaintenanceOrder
User	<COMMUNICATION_USER>
Password	<COMMUNICATION_PASSWORD>
Additional Properties	sap-client: <client number>

Name	S4HANA_PmOrdDcNtf_MaintenanceOrder
Type	HTTP
Proxy Type	OnPremise
Authentication	BasicAuthentication
URL	<Virtual hostname of exposed SAP S/4HANA> /sap/opu/odata/sap/ZZ1_VENDORCONFIRMATION_CDS /ZZ1_VendorConfirmation
User	<COMMUNICATION_USER>
Password	<COMMUNICATION_PASSWORD>
Additional Properties	sap-client: <client number>

## 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](#).

Make sure to whitelist the paths and all subpaths of the OData service mentioned earlier in the chapter “Configure Communication Scenarios in SAP S/4HANA”

## Import, Configure and deploy Integration Content

This package utilizes SAP Cloud Integration to provide integration between SAP S/4HANA and SAP Workflow.

Further details can be found in dedicated integration guide. The guide can be found in project workspace.

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

At first the Event Mesh needs to be set up on BTP using this [guide](#). Also create a service key for the Event Mesh instance.

In the SAP S/4HANA system go to the application “Communication Systems” and create a new system. For the System ID and System name use e.g. BTP\_EVENTMESH\_<REGION> where <REGION> is the region of the subaccount where the Event Mesh instance was set up in the previous step.

Once the system is created the following data needs to be added using the Event Mesh service key:

Technical Data > General:

- HostName: enterprise-messaging-messaging-gateway.cfapp.<region>.hana.ondemand.com
- Port: 443

Technical Data > OAuth 2.0 Settings:

- Auth Endpoint: Use property “tokenendpoint” (e.g. under “management”) from the service key but omit the “https://” and replace “token” at the end by “authorize”
- Token Endpoint: Use property “tokenendpoint” (e.g. under “management”) from the service key but omit the “https://”.

User for Inbound Communication:

- Create a new user and pick “User Name and Password” as “Authentication Method”

User for Outbound Communication:

- Authentication Method: OAuth 2.0
- Client Authentication: Basic
- OAuth 2.0 Client ID: Use Property “clientid” from service key
- Client Secret: Use Property “clientsecret” from service key

Save the Communication System.

In SAP S/4HANA go to application “Communication Arrangements” and create a new arrangement: The Scenario is “SAP\_COM\_0092”. As “Arrangement Name” use e.g. the same name as for the system.

For the “Communication User” reuse the user created for inbound communication before. Under “Additional Properties” specify a Channel Name, use “namespace” from the service key as “Topic Space”



and optionally add a Description.

Open the arrangement and add the following information:

- Communication System: Pick the previously create Communication System
- Outbound Communication: Pick “Authentication with OAuth 2.0” as “Supported Authentication Methods” and user the “clientid” from before.
- Under Outbound Services > Delivery of Events pick “Port” 443, for “Path” provide “/protocols/amqp10ws” and for “Service URL” provide the property “uri” from the service key ending in “amqp10ws”.

Save the changes to the communication arrangement and then click “Check Connection” to see if the Channel is active.

Go to application “Enterprise Event Enablement” and search for the channel of the communication arrangement. Open the channel and add topic

*sap/s4/beh/purchaseorder/v1/PurchaseOrder/\**

as Outbound Topic.

Go to the Event Mesh Cockpit and open the message client:

Create a Queue using the default settings using e.g. “<namespace>/ServiceOrderConfirmation” as a name. Under “Actions” choose “Queue Subscriptions” and subscribe to the topic “<namespace>/ce/sap/s4/beh/serviceconfirmation/v1/ServiceConfirmation/\*”

Also create a webhook using the following data:

- Subscription Name: PurchaseOrderToCpiWorkflow
- Queue Name: Pick the queue created just before
- Quality of Service: 0
- Exempt Handshake: Yes
- On Premise: No
- Webhook URL: “<CPI\_HTTP\_Endpoint>/startMaintenanceOrderWorkflow” where CPI\_HTTP\_Endpoint is the URL of the Cloud Platform integration http endpoint (ends with /http)
- Provide authentication with a user authorized to send CPI messages

After saving the webhook make sure the Subscription Status is “ACTIVE” otherwise choose “Resume” under “Actions”.

## Whitelist of BAPI in SAP S/4HANA

Depending on the system setup, you may need to whitelist the BAPI BAPI\_ALM\_ORDER\_MAINTAIN for RFC use. In this case, there will be an error in SAP Cloud Integration:

```
Incompatible Call Rejected, see note 2295840; Called Incompatible Function :BAPI_ALM_ORDER_MAINTAINCPROG:SAPJCo31DEST:<S4Destination>
```

To fix this, refer to the steps below:

1. Run program RS RFC\_BLACKLIST\_CUSTOM in transaction SE38.
2. Enter in the BAPI name BAPI\_ALM\_ORDER\_MAINTAIN, and press enter. The “Original Settings” would show that it is blocked on Server. Uncheck the checkbox and save.

Function Module: BAPI_ALM_ORDER_MAINTAIN	
Custom Settings	Administrative Data
<b>Custom Settings</b>	<b>Original Settings</b>
<input type="checkbox"/> Blocked on Server	<input checked="" type="checkbox"/> Blocked on Server
<input type="checkbox"/> Blocked on Client	<input type="checkbox"/> Blocked on Client

3. If prompted, give a transport request number to be able to transport this setting to another client
4. Transport to the relevant client if necessary

## Customizing Steps for Scheduling of Maintenance Orders

The following settings need to be done in customizing (SPRO→IMG):

1. Maintain Scheduling Types  
At least one of the scheduling types with the identical settings as the two scheduling types shown below ( 1-Forwards or 5-Forwards in Time) need to be available/created.

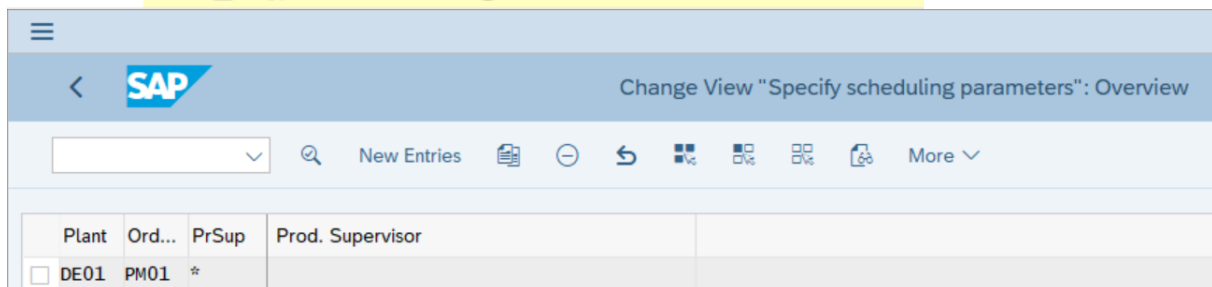
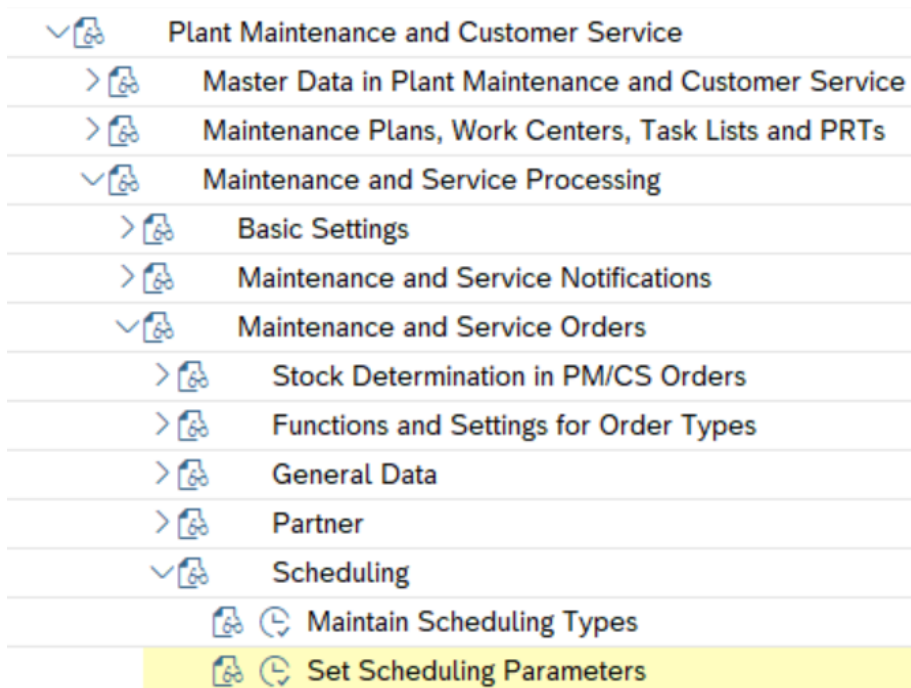
- Plant Maintenance and Customer Service
      - Master Data in Plant Maintenance and Customer Service
      - Maintenance Plans, Work Centers, Task Lists and PRTs
    - Maintenance and Service Processing
      - Basic Settings
      - Maintenance and Service Notifications
    - Maintenance and Service Orders
      - Stock Determination in PM/CS Orders
      - Functions and Settings for Order Types
      - General Data
      - Partner
    - Scheduling
      - Maintain Scheduling Types

Create Scheduling Types equal to "1 - Forwards" OR "5 - Forwards in time"

Change View "Scheduling Types": Overview

S...	Description	Forwards	Backwards	CapReq.	Current Date	With Time
<input type="checkbox"/> 1	Forwards	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>
<input type="checkbox"/> 2	Backwards	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>
<input type="checkbox"/> 3	Only capacity requirements	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="checkbox"/>
<input type="checkbox"/> 4	Current date	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="checkbox"/>
<input type="checkbox"/> 5	Forwards in time	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/> 6	Backwards in time	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>

- The scheduling parameters for the used combination of plant and order need to be maintained. The parameter "Scheduling Type" has to be set to one of the scheduling types maintained in step 1. The parameter "Adjust Dates" needs to be set to "1 Adjust basic dates, adjust dependent requirement dates to order start".



Option 1 - Scheduling Type can be "Forwards"

Option 2 – Scheduling Type can be "Forwards in time"