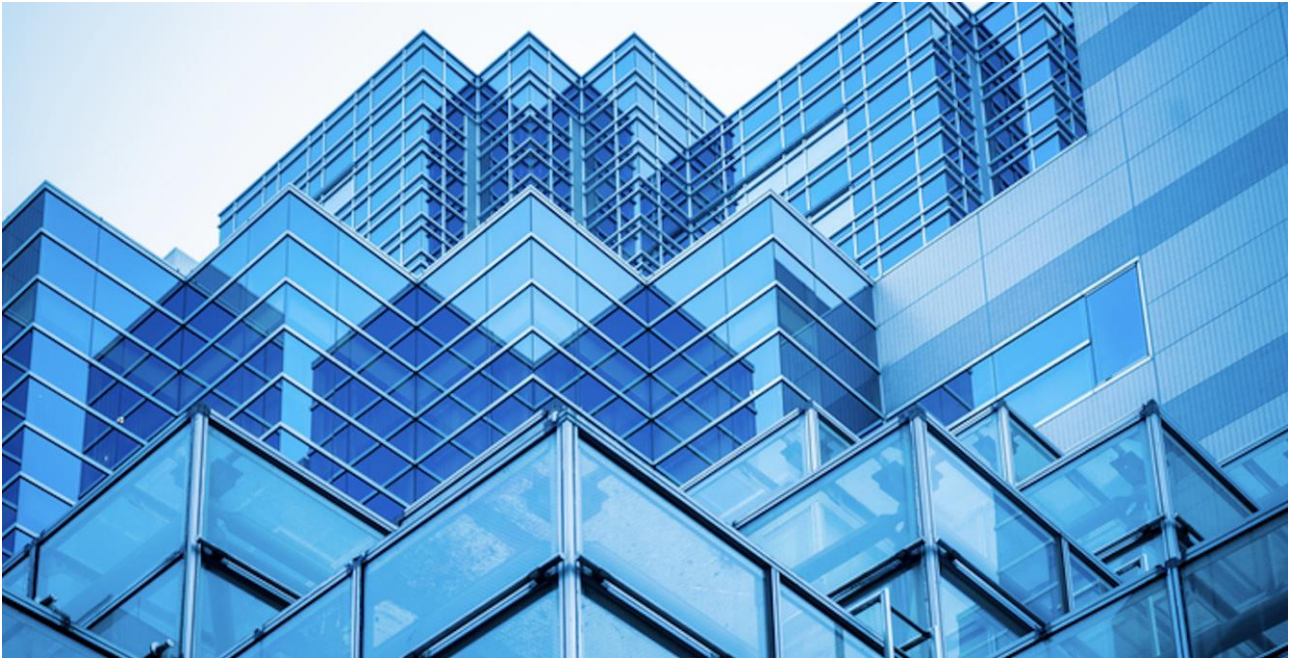




PUBLIC

SAP Build Process Automation

Manage Customer Refund Request Configuration and User Guide

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This document contains 3 sections. Each section covers different information about this template content package.

1. **Overview:** In this section, you will get quick overview of the use case, what are high-level components used and how the template works in nutshell. Prerequisite section provides information of different services of SAP Business Technology Platform that are required to use this template.
2. **Configuration Guide:** It contains sections which will guide you to setup your (a) SAP Business Technology Platform Account with destination, cloud connector, user roles etc.(b) SAPUI5 application via SAP Business Application Studio and (c) Import and configure the template using SAP Build Process Automation design studio and (d) Integration Content via SAP Integration Suite (e) SAP Work Zone to access the My Inbox or Task Center and other applications.
3. **User Guide:** This section provides details about different artefacts that are used in this template like process definition, decision diagram, action project details, forms, email notifications etc. to better understand how different capabilities are used in this template.

Note:

- Learning contents are published only for demo and reference purposes. We do not provide any support to learning / sample content.
- This documentation is not a detailed guide to setup SAP Business Technology Platform services. It assumes that IT admin who is setting the content is skilled with SAP Business Technology Platform environment. **Configuration section must be followed.**
- This template content is to accelerate your solution development. You must modify this template according to your requirements to achieve the desired business goal. To use this template content, you need to have basic knowledge and understanding of SAP Build Process Automation, SAP Integration Suite, and its capabilities.

Overview

This document provides technical information about what needs to be configured to make the package – Manage Customer Refund Request run. The primary audience of this document is technical IT / system administrators.

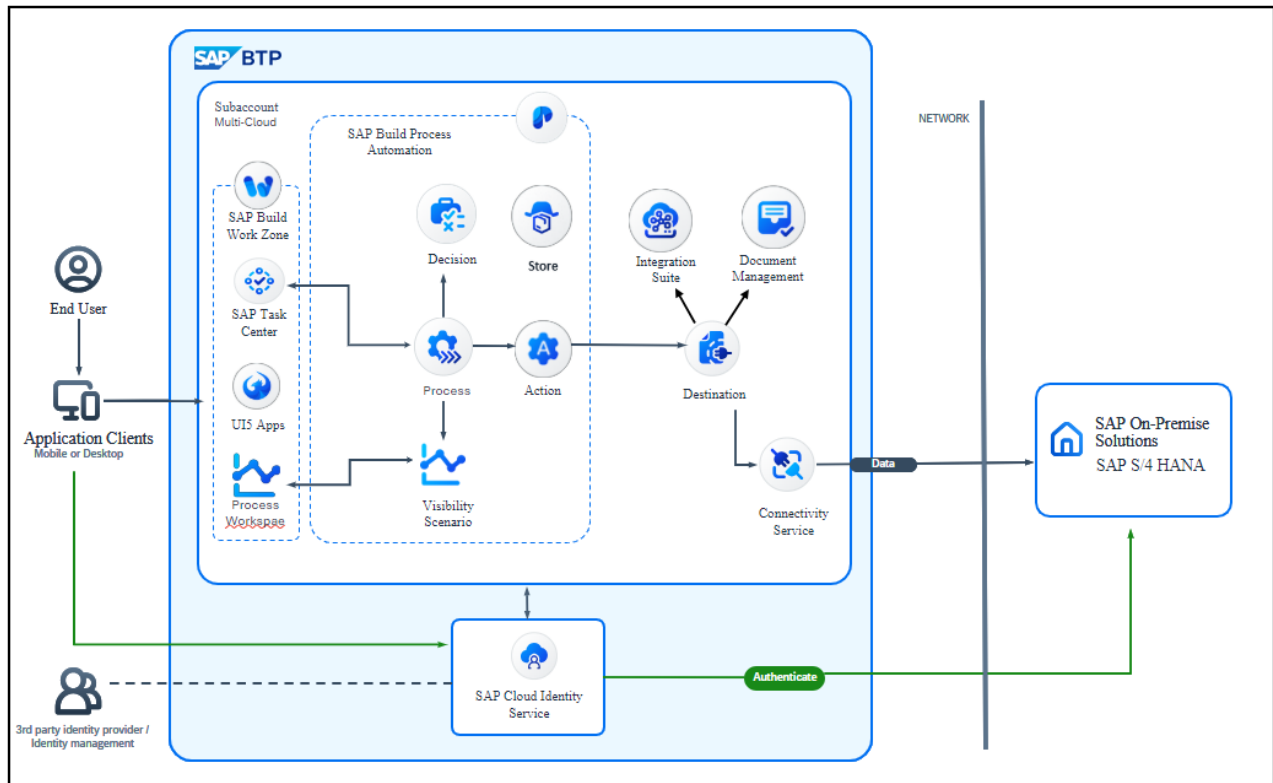
Manage Customer Refund Request content package for SAP S/4HANA automates Customer Refund Approvals in a flexible and transparent approach. It provides flexibility in executing a specific variant of the process depending on attributes such as company code, customer number etc. When a Customer Refund is created in SAP S/4HANA and is configured for external approval, a pre-configured process variant is triggered in SAP Build Process Automation based on configurable business conditions. The Customer Refund is performed based on the approvals and validations performed in the process.

This content package can be used with both SAP S/4HANA Cloud Private Edition (2023 onwards) and SAP S/4HANA On-Premise.

Features:

- Plug and Play with SAP S/4HANA without any additional development.
- Process steps delivered to approve Manage Customer Refund Request.
- Automatic email notification to parties involved.
- Decision provides flexibility in determining approver determination strategy and approvers.
- New variant of the process can be created using the pre-delivered process steps in a no-code / low-code Approach.
- Out-of-the-box visibility into key process performance indicators of the Manage Customer Refund Request.

Process Flow Diagram



Solution flow :

1. The request is triggered from Manage Customer Refund Request application by selecting customer and clicking on create button.
2. The process receives the customer refund request details, reviews the provided details, and determines whether to approve or reject the request based on business rules and criteria.
3. Once approved, the process retrieves the open items for the customer, and the refund accounting for all these open items is posted to the SAP S/4HANA system.
4. If the request is rejected, the process initiator is notified via email with the rejection details.

Note: The process can be triggered via Start UI.

Required SAP Business Technology Platform Services

The following SAP Business Technology Platform services are required to consume the **Manage Customer Refund Request**:

- SAP Build Process Automation
- SAP Connectivity service
- SAP Business Application Studio
- SAP Application Runtime Service
- SAP Integration Suite
- SAP Work Zone, standard or advanced
- SAP Cloud Identity Services - Identity Authentication (optional)
- SAP Business Technology Platform, Cloud Foundry runtime

Prerequisites

For this template to run successfully the following prerequisites are needed

- SAP Desktop Agent 3.28 or higher.
- Get access to BTP account.
- Need valid SAP S/4HANA user.
- This template requires Integration package **SAP Build Process Automation Integration with SAP S/4 HANA for Manage Customer Refund Request** to run. You can download this package separately from the store. The guide to set-up and configure integration package is mentioned along with the integration package itself.

Configuration Guide

Manage Customer Refund Request template requires SAP Build Process Automation subscription and Destination Setup for SAP Build Process Automation. Follow the [setup and configuration section](#).

Setup Business Technology Platform Cockpit

Configure SAP Build Process Automation Destination

To Access the SAP Build process Automation, you can configure the destination. Please create destination accordingly

Destination Property	Value
Name	sap_process_automation_service
Type	HTTP
URL	<"endpoints"."api">
Client ID	<"uaa"."clientid">
Client Secret	<"uaa"."clientsecret">
Token Service URL	<"uaa"."url">/oauth/token
Proxy Type Internet	Internet
Authentication	OAuth2ClientCredentials

Add the property **sap.processautomation.enabled** as **true** to view the destination in the SAP Build Process Automation tenant. Please refer [help document](#) for more details.

Configure SAP S/4HANA Destination

This content package can be used with S/4HANA Cloud On-Premise. Destinations can be created accordingly.

Destination Property	Value
Name	<Name>

Type	HTTP
URL	<SAP S/4HANA endpoint> Example: https://<s4system-name>-api.xxxxxxxx
Proxy Type Internet	Internet
Authentication	Basic Authentication
Username	<Username> of the SAP S/4HANA Communication User
Password	<Password> of the SAP S/4HANA Communication User

Configure SAP Integration Suite Destination

Configure Destination to connect to Integration Suite destination cloud system

Destination Property	Value
Name	IntegrationSuite
Type	HTTP
URL	<Integration Suite Destination endpoint> <a href="https://<cpi>.hana.ondemand.com">https://<cpi>.hana.ondemand.com
Proxy Type Internet	Internet
Authentication	Basic Authentication
Username	<Username> of the SAP S/4HANA Communication User
Password	<Password> of the SAP S/4HANA Communication User

Configure SAP Build Process Automation Email Destination

Mail notifications are used in this template to send notifications to requestor, approver, and admin during different stages of the process. Follow the instructions to setup mail destination in your SAP Business Technology Platform Account.

Configuring destination, [Configure Mail Destination](#)

- For more information refer to Create [HTTP Destinations](#) and [OAuth User Token Exchange Authentication](#).

User Roles Configuration

To access this template, the business user will need these roles:

Role Collection Name	Purpose
TaskCenterAdmin	Permission to execute calls to the connector status API and monitor configured destinations and running background jobs.
Process Automation Developer	Standard Business User, can model and publish processes
ProcessAutomationParticipant	To execute (like accessing MyInbox, running the automations, etc.) this content package, you need to have this role assigned to the respective user.

ProcessAutomationAdmin	To perform process admin activities like accessing monitoring applications etc., you need to have this role assigned to the respective user.
Business_Application_Studio_Administrator	Allows administrators to manage (export and delete) user data.
Business_Application_Studio_Developer	Allows developers to load and develop applications using SAP Business Application Studio.

For more information about SAP Build Process Automation roles, see [Authorizations](#).

Cloud Connector Configuration

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

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

Resources	Protocol	Backend-Type
/sap/opu/odata/sap/ZZ1_OPENDELIVERYITEMS_CDS/ZZ1_OpendeliveryItems	OData	SAP S/4 HANA
/sap/opu/odata/sap/ZZ1_OPENDELIVERYITEMS_CDS/ZZ1_OpendeliveryItemsResults	OData	SAP S/4 HANA
/sap/opu/odata/sap/ZZ1_CUSTOMERDETAILS_CDS/ZZ1_CustomerDetails	OData	SAP S/4 HANA
/sap/opu/odata/sap/ZZ1_COMPCURRENCY_CDS/ZZ1_CompCurrency	OData	SAP S/4 HANA
/sap/opu/odata/sap/ZZ1_OVERDUEAMT_CDS/ZZ1_OverdueAmt	OData	SAP S/4 HANA
/sap/opu/odata/sap/ZZ1_OVERDUEAMT_CDS/ZZ1_OverdueAmtResults	OData	SAP S/4 HANA
/sap/opu/odata/sap/ZZ1_SALESORDER_CDS/ZZ1_SalesOrder	OData	SAP S/4 HANA
/sap/opu/odata/sap/ZZ1_SALESORDER_CDS/ZZ1_SalesOrderResults	OData	SAP S/4 HANA
/sap/opu/odata/sap/ZZ1_CUSTOMEREMAIL_CDS/ZZ1_CustomerEmail	OData	SAP S/4 HANA
/sap/opu/odata/sap/ZZ1_DOCUMENTITEMS_CDS/ZZ1_DocumentItems	OData	SAP S/4 HANA
BAPI_ACC_DOCUMENT_POST	BAPI/RFC	SAP S/4 HANA
BAPI_AR_ACC_GETOPENITEMS	BAPI/RFC	SAP S/4 HANA
RFC_READ_TABLE	BAPI/RFC	SAP S/4 HANA

Setup Content Package

Import SAP Build Process Automation content

Standard automation packages released by SAP will be available at the store .To know more about the store visit [SAP Build Process Automation Store](#)

This template can be downloaded from the Store:

1. Navigate to the Store in your SAP Build Process Automation account.
2. Select the Project Type filter as “Business Process.”
3. In the Search bar type “Manage Customer Refund Request”
4. Select the “Create from Template” button to add the template into your lobby.
5. After successfully adding the template, navigate back to the lobby to find the “Manage Customer Refund Request” template available for use.

Caution: Be sure to select the Project Type as “Business Process” in the filters.

Import and deploy TASK UI application

The content package requires the SAP UI5 user interface which is available in Manage Customer Refund Request Process content package. Below are details of Task UI application

TASK UI APPLICATION:

- RefundUserUI-Accounts-Receivables-Customer-Refund
- RefundAppr-Accounts-Receivables-Customer-Refund

Following steps can be followed to utilize the SAP UI5 application provided with this process package:

- Download the SAPUI5 application Task UI from the imported store project.
- Open Business Application Studio and import the previously downloaded SAPUI5 project
- Build SAPUI5 project using mta.yaml file & the generated project (generated mtar file will be available in the mta_archives folder) file can be deployed.

Configuration & Modification

Once you have added the content to your lobby, you will find the project in your project list. Adapt the content template based on your requirements.

Configure Decisions

There are 6 decisions in this template. We can configure the rules as per our requirements.

1. Determine Approver

Decision used in the approval process step to identify the potential approvers based on different company policy. To modify the decision:

- In process editor, double click to open the decision.
- Select the rule from the decision diagram.

Determine Approver

Description: Decision used in the approval process step to identify the potential approvers based on different company policy

Inputs/Output Rules Variables

Input Parameters

Name*	Description*	Type*	List
Refund Request Details	Refund request details	Refund Request Det...	☐
Approval Step	Approval step	String	☐

[Add Input Parameter](#)

Output Parameter

Name*	Description*	Type*	List
Approver Details	Approver details	Approver Details	☐

[Add Output Parameter](#)

- Edit the rule to add more rows or update existing value.

Determine Approver

General Information: Status: Draft Hit Policy: **FIRST MATCH**

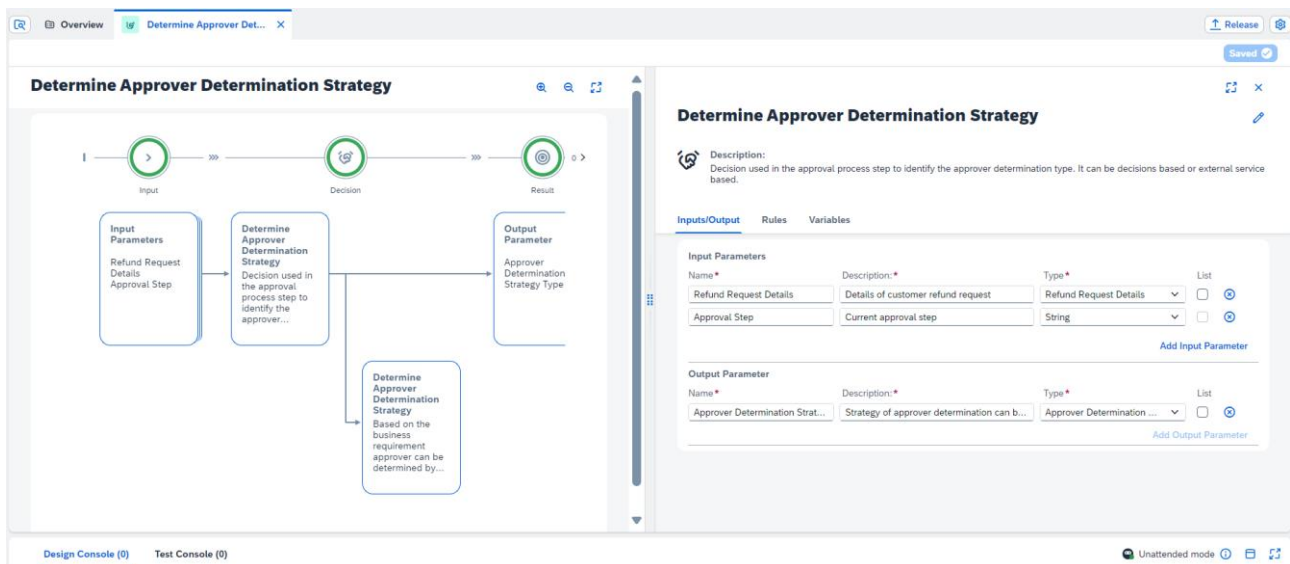
Description: Determine approver for each approval step in the refund request approval process based on the conditions like company code and customer

Decision Table

If	Then
Company Code Customer Num... Approval Step	Is Approval Re... User ID User Group email
MATCHES "*" MATCHES "*" = 'Sales'	true
MATCHES "*" MATCHES "*" = 'Finance'	true

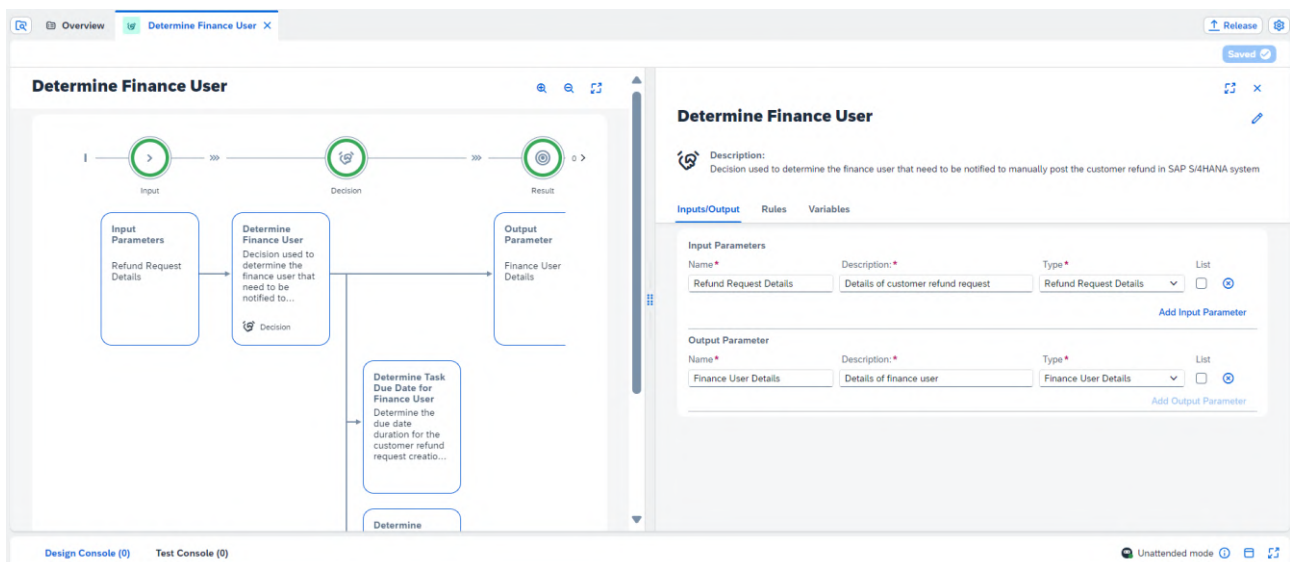
2. Determine Approver Determination Strategy

Decision used in the approval process step to identify the approver determination type. It can be decisions based or external Service based.



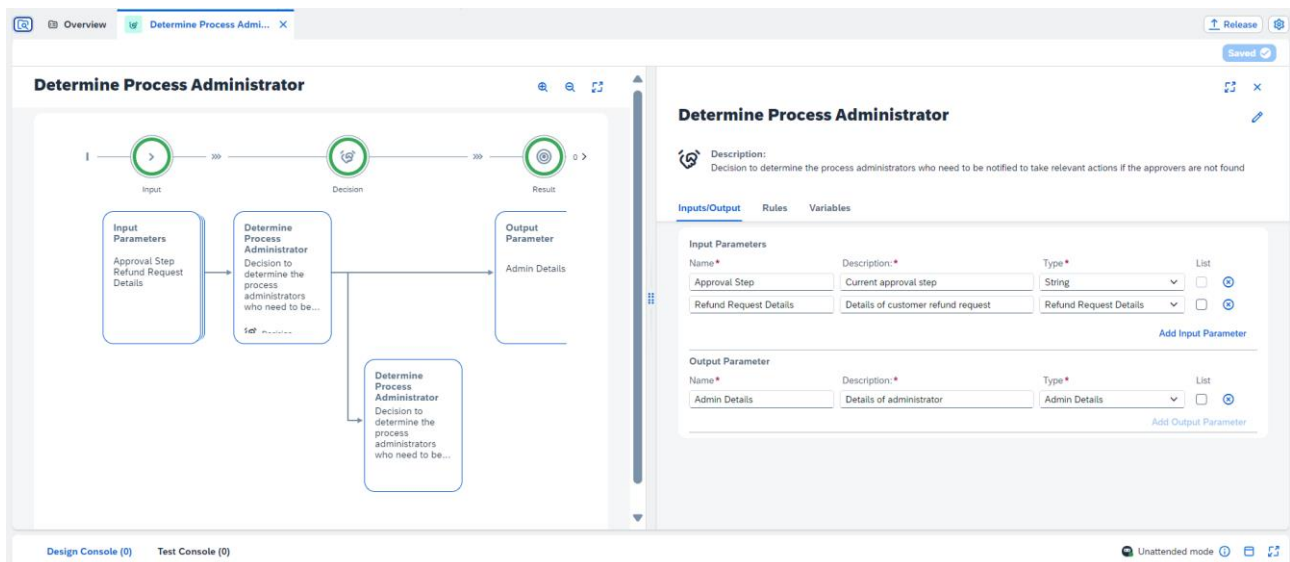
3. Determine Finance User

Decision used to determine the finance user that need to be notified to manually post the customer refund in SAP S/4HANA system



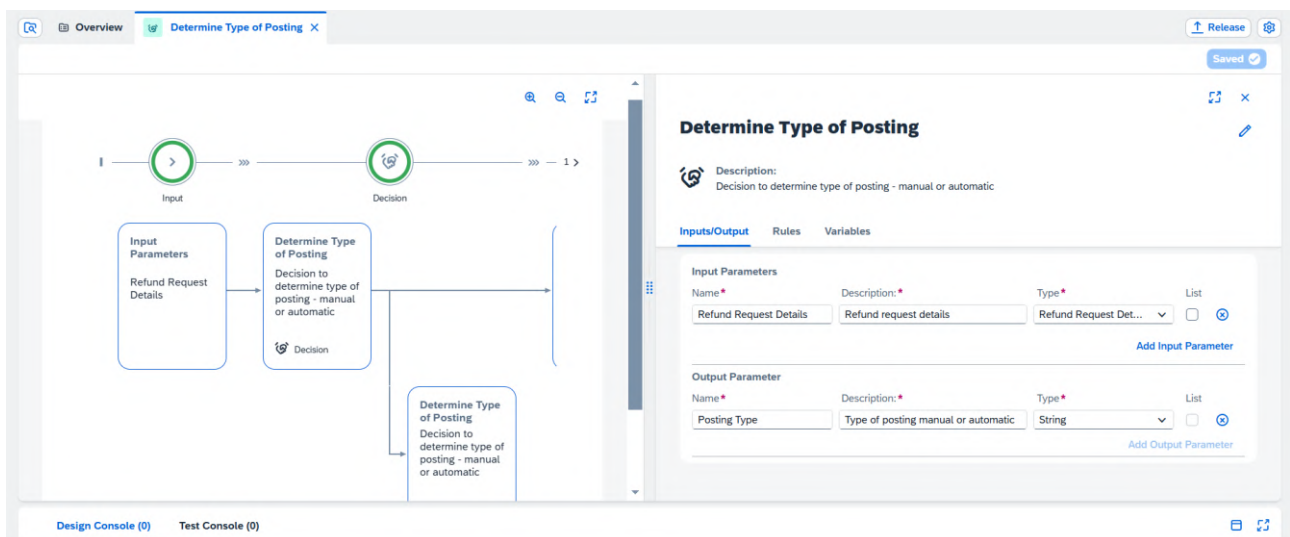
4. Determine Process Administrator

Decision to determine the process administrators who need to be notified to take relevant actions if the approvers are not found



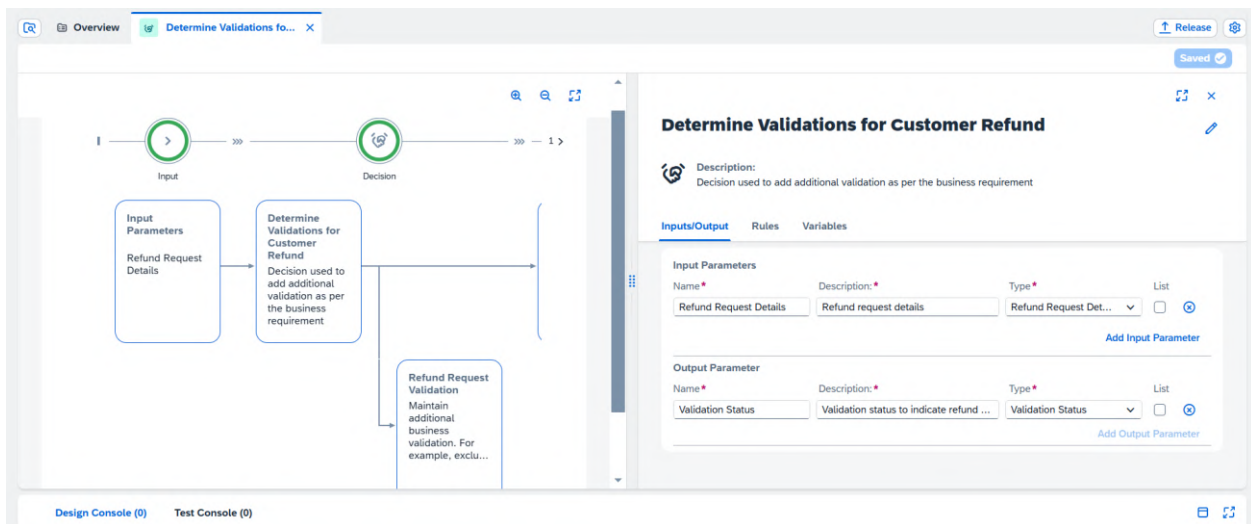
5. Determine Type of Posting

Decision used to determine type of posting - manual or automatic.



6. Determine Validations for Customer Refund

Decision used to add additional validation as per the business requirement.



Configure Email

Email notifications are sent to requestor and approver at different places during process and task execution. All the email artefacts in the process have default template body which can be modified.

To update the email body content, do the following:

- Select the mail artefact in the process.
- From the **Settings** in the right-side panel, check the **Mail Header** to confirm the **To** field (or email recipients) and the **Subject**. You can adjust the subject and recipient, if needed.
- You may also add someone in **CC**.
- Click to Open '**Mail Body Editor**'.

Mail Body

Dear Approver,

Kindly approve the customer refund request in your My Inbox application.

Customer Refund Request Record Details:

Company Code -

Company Code Name -

Customer Number -

Customer Name -

Net Balance Amount -

Currency -

Request Date -

This is a system generated email, please do not respond to it.

[Close](#)

- The mail editor allows you to write and adjust text according to your needs. You can also reuse information that has been collected during the process. If you want to use additional process context data, you can simply drag the fields from the left menu to the editor on the right.

For more information on email configuration and text, refer to this [link](#)
In case any further extension needs to be made then follow the reference links below.

Create Process

[Create a Business Process | SAP Help Portal](#)

Create Forms

[Create a Form | SAP Help Portal](#)

Create Automation

[Create an Automation | SAP Help Portal](#)

Create Decision

[Create a Decision | SAP Help Portal](#)

Create Process Visibility Scenario

[Create a Visibility Scenario | SAP Help Portal](#)

Release and Deploy the Process

After configuring your process, it's time to publish, test and run it. To run a process, you must first release and deploy it.

Release - This locks the version of your process, meaning that no further edits can be made to that version.

At this stage, the process can't be run and isn't available to participants yet.

To release a version of your process:

- First ensure that the status is listed as 'Editable'.
- Then click 'Release'.

For more information please visit [SAP Build Process Automation](#) .

Note: If this is the first time you've released the process, a version labelled 1.0.0 is released. For subsequent releases, you're prompted to select a version type before the process is released.

Import Destination

Actual destinations that are created in SAP BTP cockpit will be required when you deploy the process. This destination will be mapped to the destination environment variables during deployment.

To configure destination,

- Click on **Control Tower**.
- Select **Destinations** from the right panel.
- Click **Add**

Select the destinations created in the setup section to be added.

For more information and screen shots, please refer to the below link: [Manage Destinations](#)

Deploy – This takes a released version of a process and enables it to be actively run and monitored. A deployed version of this approval process unlocks the request form, allowing participants to submit requests

and the approvers to view items in their inbox.

To deploy a released version of your process,

- First ensure that the status is listed as 'Released'.
- Then click '**Deploy**'.

To deploy your project, you will be prompted to provide a destination as an environment variable. Select the destination from the drop-down and fill other environment variables as well.

- **IntegrationSuite:** Business Technology Platform destination to connect with SAP Integration Suite APIs.

Note: If you do not map your destination environment variable with actual SAP Business Technology Platform destination during deployment, then the process will enter erroneous state when it tries to connect to the external system.

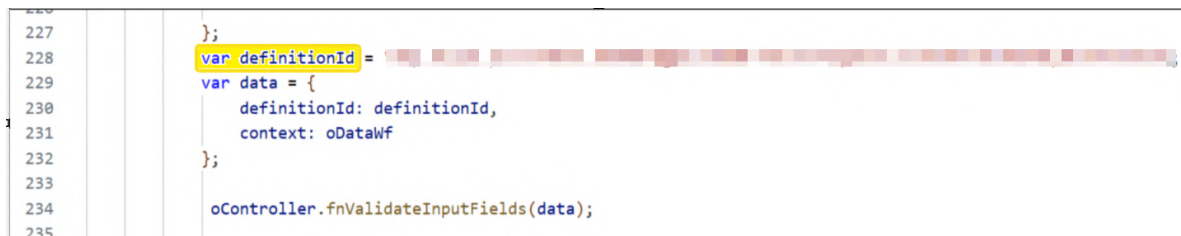
Configure and Deploy Start UI

The content package requires the SAP UI5 user interface which is available in Manage Customer Refund Request content package. Below are details of Start UI application

Start UI Application: RefundCreateUI-Accounts-Receivables-Customer-Refund

Following steps can be followed to utilize the SAP UI5 application provided with this process package:

- Download the SAPUI5 application Start UI from the imported store project.
- Open Business Application Studio and import the previously downloaded SAPUI5 project.
- The definition id can be found in the Monitoring section, inside Process and Workflow Definitions. You need to enter the project name and go to the main process. The ID mentioned in the process would be the definition id. Refer [determine the workflow definition ID](#) for more details
- This definition id must be updated in Start UI application. It will be maintained either in the i18n file or controller.js file. Please refer below screenshot



```
227     };
228     var definitionId = [REDACTED];
229     var data = {
230         definitionId: definitionId,
231         context: oDataWf
232     };
233
234     oController.fnValidateInputFields(data);
235
```

- Build SAPUI5 project using mta.yaml file & the generated project (generated mtar file will be available in the mta_archives folder) file can be deployed.

Configure SAP Work Zone

Configure SAP Work Zone to access the start UI for this automation.

Once SAP Work zone is configured, perform the following steps to create the tile for the start UI:

1. Open content manager and click on the HTML5 Apps.
2. Select the Import Financial Data Start UI from the list of apps and choose Add.
3. Add the relevant roles to the user. Manage Customer Refund Request application start UI will be available to the user as a tile in the SAP Work Zone.

If you plan to use SAP Work Zone service, then configure [SAP Work Zone with SAP Build Process Automation Applications](#) using help documentation.

User Guides

Capabilities

The following are the capabilities of this template:

For detailed information about different artifacts, please refer [help documentation](#)

Type	Name	Description
Decision	Determine Approver	Decision used in the approval process step to identify the potential approvers based on different company policy.
Decision	Determine Approver Determination Strategy	Decision used in the approval process step to identify the approver determination type. It can be decisions based or external Service based.
Decision	Determine Finance User	Decision used to determine the finance user that need to be notified to manually post the customer refund in SAP S/4HANA system
Decision	Determine Process Administrator	Decision to determine the process administrators who need to be notified to take relevant actions if the approvers are not found
Decision	Determine Type of Posting	Decision used to determine type of posting - manual or automatic
Decision	Determine Validations for Customer Refund	Decision used to provide additional validation as per the business requirement
Process	Customer Refund Request Process	Main process for customer refund request to get approval and create customer request in SAP S/4 HANA system.
Process	Refund Request Approval Process	Process to determine approver and get approval for the requested customer refund.
Process	Refund Request Creation Process	Process to create customer refund in SAP S/4HANA system.
Process	Refund Request Validation Process	Process to validate requested customer refund details before sending it for approval
Form	Customer Refund Request Approval Form	Form for approving customer refund request.
Form	Refund Admin User Task	Form for admin action to assign approver manually.

Form	Refund Confirmation Task	Form for refund confirmation to the requestor.
Data type	Admin Details	Data type for details of process administrators who will be notified to take action if there is any issue with determining the approvers.
Data type	Approver Details	Data type for approver details for approving sales order and due duration of approval task.
Data type	Approver Determination Strategy Type	Data type for approver determination strategy which can either be decisions or external service.
Data type	Finance User Details	Data type for finance user details to manually post the customer refund in SAP S/4HANA system.
Data type	History Details	Data type for history details like processor decision and comments.
Data type	Refund Request Creation Details	Data type for refund request creation details.
Data type	Refund Request Details	Data type for refund request details.
Data type	Validation Status	Data type for validation status to indicate if refund request is valid or not.

Actions

Manage Customer Refund Request Action

This action project is used for creating customer refund requests in SAP S/4 HANA system.

Method	API	API Path	Purpose
POST	N/A	/http/Wfm/S4CustomerRefund	This action project is used for creating customer refund requests in S/4 HANA system.

Appendix

Custom CDS View and Custom Communication Scenario

To call the APIs related to **Manage Customer Refund Request**, the following CDS Views and custom communication scenarios along with communication arrangement should be enabled for the communication user. The SAP S/4HANA custom communication scenario consists of the external API details which was used to display the customer details, sales orders, delivery items, ledger balance and value help used in Manage Customer Refund Request application. This application is developed based on [CDS as external ODATA API](#) and [creation of custom communication scenario](#).

The creation of Custom CDS View as external API's and custom communication scenario are provided below.

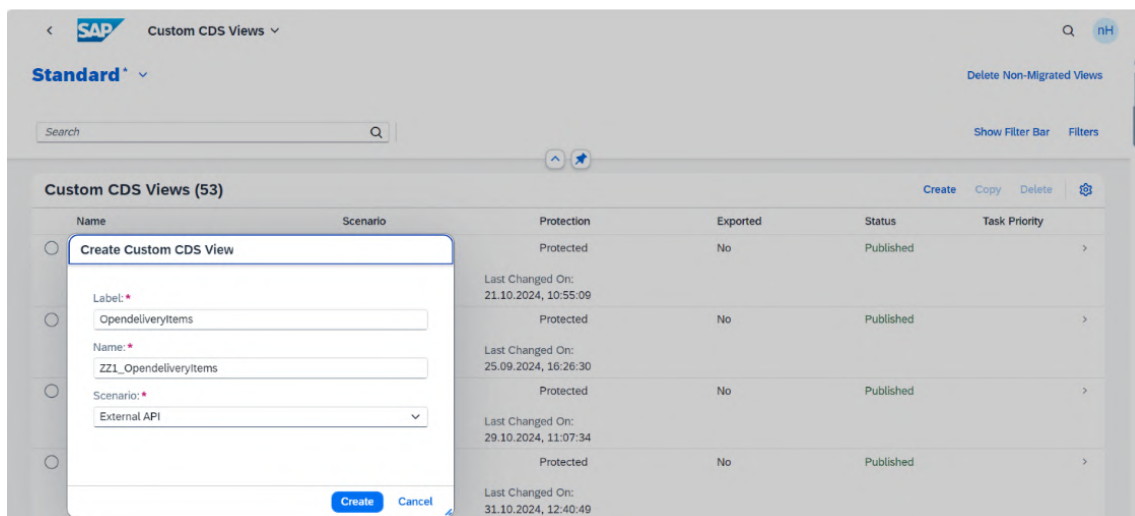
Creation of CDS View Open Delivery Items (ZZ1_OpenDeliveryItems)

Package Name: SAP S/4HANA Cloud for Sales

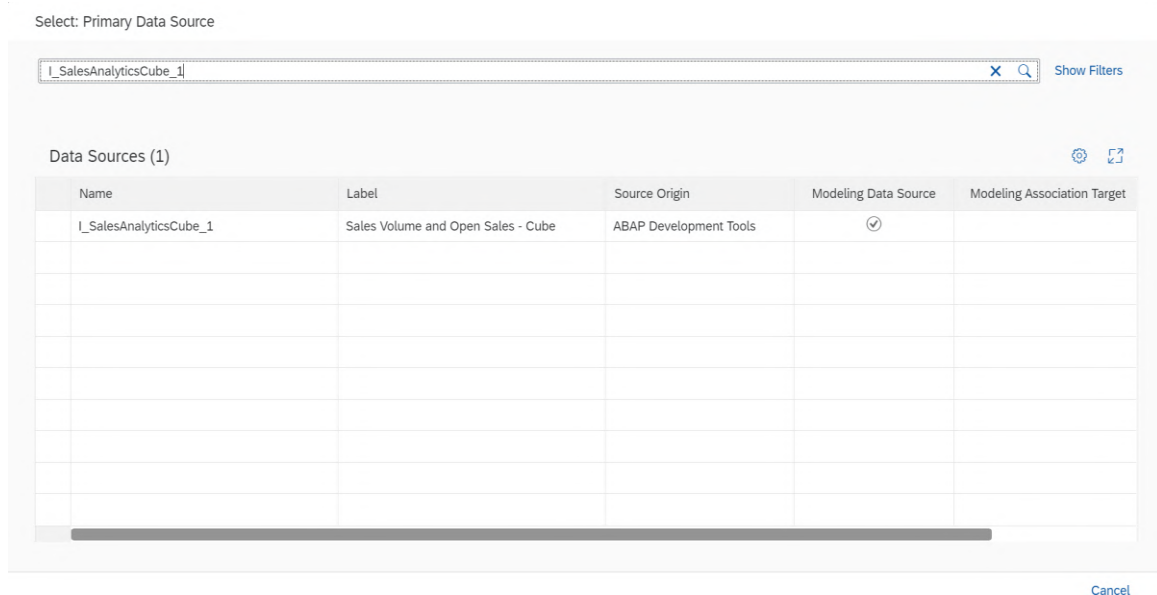
Label: OpenDeliveryItems

Name: ZZ1_ OpenDeliveryItems

1. Login to S/4HANA cloud Fiori Launchpad with required credentials.
2. Go to **Extensibility** business group and click on **Custom CDS Views** tile
3. Click on Create button, it will open the pop-up. Provide Label and Name. Choose **External API** option from scenario dropdown and click on button create in pop-up window.



4. Select Primary Data Source, a popup will open with list of CDS Views. Provide the Standard CDS view name as I_SalesAnalyticsCube_1 in search field and press enter. Select the required CDS to continue.



- In case to use multiple CDS in Data Sources tab, click on Add button and select Associated Data Sources which opens pop-up. Provide the Standard CDS view name I_SlsOrdConfAnalyticsCube in search field and Click “OK”.

The screenshot shows the 'Data Sources' tab in the SAP interface. It contains a table with one data source: **I_SalesAnalyticsCube_1**, which is a 'Primary Datasource' with a 'Released' status. To the right of the table is an 'Add' button with a dropdown menu that includes 'Primary Data Source' and 'Associated Data Sources'.

This screenshot shows the 'Select: Associated Data Source' pop-up window. A search bar at the top contains the text 'I_SlsOrdConfAnalyticsCube'. Below the search bar, a table lists available data sources. The first entry, **I_SlsOrdConfAnalyticsCube**, is selected with a checkmark. This entry is identified as a 'Confirmation of Sales Orders - Cube' from 'ABAP Development Tools'.

Name	Label	Source Origin	Modeling Data Source	Modeling Association Target
☒ I_SlsOrdConfAnalyticsCube	Confirmation of Sales Orders - Cube	ABAP Development Tools	☒	

At the bottom, the 'Selected Items and Conditions' section shows 'I_SlsOrdConfAnalyticsCube' with a close button. 'OK' and 'Cancel' buttons are at the bottom right.

- After selection of primary and secondary data sources, click on Join condition icon  which open Define Join Conditions pop-up, click Add button and make relationship between two data sources by selection of similar fields in Field of Associated Data Source popup and change cardinality as per requirement of CDS Views.

The screenshot shows the 'Custom CDS View Details' page for 'OpenDeliveryItems'. It lists two data sources: **I_SalesAnalyticsCube_1** (Primary Datasource) and **I_SlsOrdConfAnalyticsCube** (Associated Datasource). The cardinality for the second source is 'Zero or One [0..1]'. A red box highlights the join condition icon (two interlocking circles) in the 'Join Condi' column for the second data source.

Define Join Conditions: Perform the join condition between these data sources as listed below:
 Name: I_SlsOrdConfAnalyticsCube
 Alias: _I_SlsOrdConfAnalyticsCube
 Cardinality: Zero or One [0..1]

Data Field	Source	Operator	Value Type	Value
SalesOrder		Equal	Field	I_SalesAnalyticsCube_1. SalesDocument
SalesOrderItem		Equal	Field	I_SalesAnalyticsCube_1.SalesDocumentItem
BillToParty		Equal	Field	I_SalesAnalyticsCube_1. Customer

- Go to Elements tab, click add button and select Elements from submenu and select required fields from multiple CDS click Ok button.

OpenDeliveryItems
Dependencies: 1 (Compatible Changes Allowed)

Navigation: Data Sources » Parameters » **Elements** » Element Properties » Filter » Log » Next Steps

Elements (17)

Key	Alias	Type	Path	Label	Actions	Status
☐	DeliveryDocument	CHAR (10)	I_SalesAnalyticsCube_1.DeliveryDocument	Delivery	Add Elements Calculation Parameters	
☐	DeliveryDocumentItem	NUMC (6)	I_SalesAnalyticsCube_1.DeliveryDocumentItem	Item		
☐	BillingDocument	CHAR (10)	I_SalesAnalyticsCube_1.BillingDocument	Billing Document		
☐	BillingDocumentItem	NUMC (6)	I_SalesAnalyticsCube_1.BillingDocumentItem	Item		

Select: Elements

Search

Items

Alias	Key	Type	Label	Status
▼ I_SalesAnalyticsCube_1		Primary Data S...	Sales Volume and Open Sales - Cube	
☒ SalesDocument	✓	CHAR (10)	Sales Document	
☐ SalesDocumentItem	✓	NUMC (6)	Sales Document Item	
☐ ScheduleLine	✓	NUMC (4)	Schedule Line Number	
☐ BillingPlan	✓	CHAR (10)	Bill. Plan No.	
☐ BillingPlanItem	✓	NUMC (6)	Item	
☐ DeliveryDocument	✓	CHAR (10)	Delivery	
☐ DeliveryDocumentItem	✓	NUMC (6)	Item	
☐ BillingDocument	✓	CHAR (10)	Billing Document	
☐ BillingDocumentItem	✓	NUMC (6)	Item	

Selected Items and Conditions (1)

SalesDocument x

OK Cancel

OpenDeliveryItems					
Dependencies: 1 (Compatible Changes Allowed)					
<div> Data Sources Parameters Elements Element Properties Filter Log Next Steps </div>					
Elements (17)					
☐	Key	Alias	Type	Path	Label
☒	ON	SalesDocument	CHAR (10)	I_SalesAnalyticsCube_1.SalesDocument	Sales Document
☒	ON	SalesDocumentItem	NUMC (6)	I_SalesAnalyticsCube_1.SalesDocumentItem	Sales Document Item
☒	ON	ScheduleLine	NUMC (4)	I_SalesAnalyticsCube_1.ScheduleLine	Schedule Line Number
☒	ON	BillingPlan	CHAR (10)	I_SalesAnalyticsCube_1.BillingPlan	Bill. Plan No.
☒	ON	BillingPlanItem	NUMC (6)	I_SalesAnalyticsCube_1.BillingPlanItem	Item
☒	ON	DeliveryDocument	CHAR (10)	I_SalesAnalyticsCube_1.DeliveryDocument	Delivery
☒	ON	DeliveryDocumentItem	NUMC (6)	I_SalesAnalyticsCube_1.DeliveryDocumentItem	Item
☒	ON	BillingDocument	CHAR (10)	I_SalesAnalyticsCube_1.BillingDocument	Billing Document
☒	ON	BillingDocumentItem	NUMC (6)	I_SalesAnalyticsCube_1.BillingDocumentItem	Item
☐	OFF	Customer	CHAR (10)	I_SalesAnalyticsCube_1.Customer	Customer
☐	OFF	OpnOutDelivsForInvNetAmtInDC	CURR (19,2)	I_SalesAnalyticsCube_1.OpnOutDelivsForInvNetAmtInDC	Open Deliveries
☐	OFF	OpnOutDelivsForInvQty	QUAN (13,3)	I_SalesAnalyticsCube_1.OpnOutDelivsForInvQty	Open Deliveries Qty
☐	OFF	ShpdNotInvcdDelivsNetAmtInDC	CURR (19,2)	I_SalesAnalyticsCube_1.ShpdNotInvcdDelivsNetAmtInDC	Deliveries Shipped But Not Invoiced
☐	OFF	ShpdNotInvcdDelivsQuantity	QUAN (15,3)	I_SalesAnalyticsCube_1.ShpdNotInvcdDelivsQuantity	Deliveries Shipped But Not Invoiced Qty
☐	OFF	DisplayCurrency	CURK (5)	I_SalesAnalyticsCube_1.DisplayCurrency	Display Currency
☐	OFF	BaseUnit	UNIT (3)	I_SalesAnalyticsCube_1.BaseUnit	Base Unit of Measure
☐	OFF	BillingCompanyCode	CHAR (4)	I_SlsOrdContAnalyticsCube.BillingCompanyCode	CCode to Be Billed

8. Click on Publish button present on Footer.

Creation of CDS View Customer details (ZZ1_customerDetails)

Package Name: SAP S/4HANA Cloud for Database and Data Management

Label: customer

Name: ZZ1_customerDetails

For 4th step select primary data source as C_Customersuppliercompanycode

For step 5, select I_CustomerCompany as Associated data source.

For step 6, use below join condition.

Cardinality: Zero or One[0..1]

Data Source Field	Operator	Value Type	Value
Customer	Equal	Field	Accounte

r
Repeat step 7 by selecting required fields in Elements tab as shown in below table

Key	Alias	Path	Label
ON	Account	C_Customersuppliercompanycode.Account	Customer
ON	CompanyCode	C_Customersuppliercompanycode.CompanyCode	Company Code
OFF	CompanyName	C_Customersuppliercompanycode.CompanyCodeName	Company Name
OFF	FullName	C_Customersuppliercompanycode.FullName	Customer Name
OFF	Name	C_Customersuppliercompanycode.Name	Name of



			Customer
OFF	DeletionIndicator	_I_CustomerCompany.DeletionIndicator	Co.cde deletion flag

Repeat step 8 by publishing CDS View

Creation of CDS view Company Code Currency (ZZ1_CompCurrency)

Package Name: SAP S/4HANA Cloud for Finance

Label: CompCurrency

Name: ZZ1_CompCurrency

Repeat step 1 to 3 as mentioned above in Open Delivery Items CDS

For 4th step select primary data source as I_CompanyCode as shown in Step 4 above.

Steps 5 & 6 are not required as it is single data source

Repeat step 7 by selecting required fields in Elements tab as shown in below table

Key	Alias	Path	Label
ON	CompanyCode	I_CompanyCode.CompanyCode	Company Code
OFF	Currency	I_CompanyCode.Currency	Currency

U

Repeat step 8 by publishing CDS View

Creation of CDS View Overdue Amount (ZZ1_OverdueAmt)

Package Name: SAP S/4HANA Cloud for Finance

Label: OverdueAmt

Name: ZZ1_OverdueAmt

Repeat step 1 to 3 as mentioned above in Open Delivery Items CDS

For 4th step, select primary data source as I_FutureAccountsReceivables as shown in Step 4 above.

Steps 5 & 6 are not required as it is single data source

Repeat step 7 by selecting required fields in Elements tab as shown in below table

Key	Alias	Path	Label
ON	CompanyCode	I_FutureAccountsReceivables.CompanyCode	Company Code
ON	Customer	I_FutureAccountsReceivables.Customer	Customer
ON	GLAccount	I_FutureAccountsReceivables.GLAccount	G/L Account
ON	SpecialGLCode	I_FutureAccountsReceivables.SpecialGLCode	Special G/L
ON	NetDueIntervalText	I_FutureAccountsReceivables.NetDueIntervalText	Net Due Interval
OFF	CompanyCode_1	I_FutureAccountsReceivables.CompanyCode	Company Code

OFF	Customer_1	I_FutureAccountsReceivables.Customer	Customer
OFF	DisplayCurrency	I_FutureAccountsReceivables.DisplayCurrency	Display Currency
OFF	TotalOverdueAmtInDsp Crcy	I_FutureAccountsReceivables.TotalOverdueAmtIn DspCrcy	Overdue Amount
OFF	AmountInDisplayCurren cy	I_FutureAccountsReceivables.AmountInDisplayCu rrency	Amount in Displ.Crcy

Repeat step 8 by publishing CDS View

Creation of CDS View Open Sales Orders (ZZ1_SalesOrder)

Key	Alias	Path	Label
ON	SalesOrder	I_SlsOrdConfAnalyticsCube.SalesOrder	Sales Order
ON	SalesOrderItem	I_SlsOrdConfAnalyticsCube.SalesOrderItem	Item
OFF	TotalNetAmount	I_SlsOrdConfAnalyticsCube.TotalNetAmount	Order Net Value
OFF	ConfdDelivQtyInOrderQtyUnit	I_SlsOrdConfAnalyticsCube.ConfdDelivQtyInOrd erQtyUnit	CumltvCon fd Qty(SU)
OFF	OrderQuantityUnit	I_SlsOrdConfAnalyticsCube.OrderQuantityUnit	Sales Unit
OFF	TransactionCurrency	I_SlsOrdConfAnalyticsCube.TransactionCurrency	Document Currency
OFF	NetAmount	I_SlsOrdConfAnalyticsCube.NetAmount	Order Item Net Value
OFF	BaseUnit	I_SlsOrdConfAnalyticsCube.BaseUnit	Base Unit of Measure
OFF	Material	I_SlsOrdConfAnalyticsCube.Material	Material
OFF	ConfdDeliveryQtyInBase Unit	I_SlsOrdConfAnalyticsCube.ConfdDeliveryQtyIn BaseUnit	Cumltv Confd Qty(BU)
OFF	RequestedDeliveryDate	I_SlsOrdConfAnalyticsCube.RequestedDeliveryD ate	Requested Delivery Date
OFF	BillToParty	I_SlsOrdConfAnalyticsCube.BillToParty	Bill-to Party
OFF	BillingCompanyCode	I_SlsOrdConfAnalyticsCube.BillingCompanyCod e	CCode to Be Billed
OFF	SoldToParty	I_SlsOrdConfAnalyticsCube.SoldToParty	Sold-to Party

Package Name: SAP S/4HANA Cloud for Sales

Label: SalesOrder

Name: ZZ1_SalesOrder

Repeat step 1 to 3 as mentioned above in Open Delivery Items CDS

For 4th step select primary data source as I_SlsOrdConfAnalyticsCube as shown in Step 4 above.

Steps 5 & 6 are not required as it is single data source

Repeat step 7 by selecting required fields in Elements tab as shown in below table

Repeat step 8 by publishing CDS View

Creation of CDS View Customer Email (ZZ1_CustomerEmail)

Package Name: SAP S/4HANA Cloud for Database and Data Management - I_Customer
And SAP S/4HANA Cloud for Cross Applications - I_AddressEmailAddress_2

Label: CustomerEmail

Name: ZZ1_CustomerEmail

Repeat step 1 to 3 as mentioned above in Open Delivery Items CDS

For 4th step select primary data source as I_Customer as shown in Step 4 above.

For step 5, select I_AddressEmailAddress_2 as Associated data source.

For step 6, use below join condition.

Cardinality: Zero or One[0..1]

Data Source Field	Operator	Value Type	Value
AddressID	Equal	Field	I_Customer.AddressID

Repeat step 7 by selecting required fields in Elements tab as shown in below table

Key	Alias	Path	Label
ON	Customer	I_Customer.Customer	Customer
OFF	CustomerFullName	I_Customer.CustomerFullName	Customer Name
OFF	EmailAddress	_I_AddressEmailAddress_2.EmailAddress	Email Address
OFF	AddressID	I_Customer._AddressDefaultRepresentation.AddressID	Address Number

Repeat step 8 by publishing CDS View

Creation of CDS View Ledger Items (ZZ1_DocumentItems)

Package Name: SAP S/4HANA Cloud for Finance

Label: DocumentItems

Name: ZZ1_DocumentItems

Repeat step 1 to 3 as mentioned above in Open Delivery Items CDS

For 4th step select primary data source as I_OperationalAcctgDocCube as shown in Step 4 above.

Steps 5 & 6 are not required as it is single data source

Repeat step 7 by selecting required fields in Elements tab as shown in below table

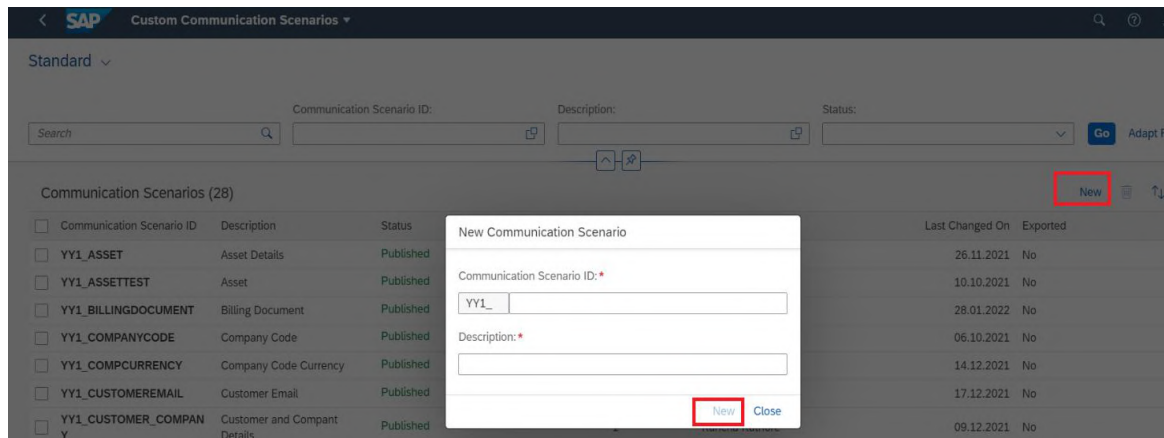
Key	Alias	Path	Label
ON	CompanyCode	I_OperationalAcctgDocCube.CompanyCode	Company Code
ON	FiscalYear	I_OperationalAcctgDocCube.FiscalYear	Fiscal Year
ON	AccountingDocument	I_OperationalAcctgDocCube.AccountingDocument	Journal Entry

ON	AccountingDocumentItem	I_OperationalAcctgDocCube.AccountingDocumentItem	Posting View Item
OFF	Customer	I_OperationalAcctgDocCube.Customer	Customer
OFF	DocumentDate	I_OperationalAcctgDocCube.DocumentDate	Journal Entry Date
OFF	PostingDate	I_OperationalAcctgDocCube.PostingDate	Posting Date
OFF	InvoiceReference	I_OperationalAcctgDocCube.InvoiceReference	Invoice Reference
OFF	DocumentItemText	I_OperationalAcctgDocCube.DocumentItemText	Item Text
OFF	AmountInCompanyCodeCurrency	I_OperationalAcctgDocCube.AmountInCompanyCodeCurrency	Amount in Company Code Currency
OFF	AmountInTransactionCurrency	I_OperationalAcctgDocCube.AmountInTransactionCurrency	Amount in Transaction Currency
OFF	TransactionCurrency	I_OperationalAcctgDocCube.TransactionCurrency	Transaction Currency
OFF	SpecialGLCode	I_OperationalAcctgDocCube.SpecialGLCode	Special G/L
OFF	PurchasingDocument	I_OperationalAcctgDocCube.PurchasingDocument	Purchasing Document
OFF	IsCleared	I_OperationalAcctgDocCube.IsCleared	Is Cleared
OFF	FinancialAccountType	I_OperationalAcctgDocCube.FinancialAccountType	Account Type
OFF	CompanyCodeCurrency	I_OperationalAcctgDocCube.CompanyCodeCurrency	Company Code Currency
OFF	CompanyCodeCurrency_1	I_OperationalAcctgDocCube.CompanyCodeCurrency	Company Code Currency
OFF	SalesDocument	I_OperationalAcctgDocCube.SalesDocument	Sales Document
OFF	AssignmentReference	I_OperationalAcctgDocCube.AssignmentReference	Assignment Reference

Repeat step 8 by publishing CDS View

Creation of Custom Communication Scenario

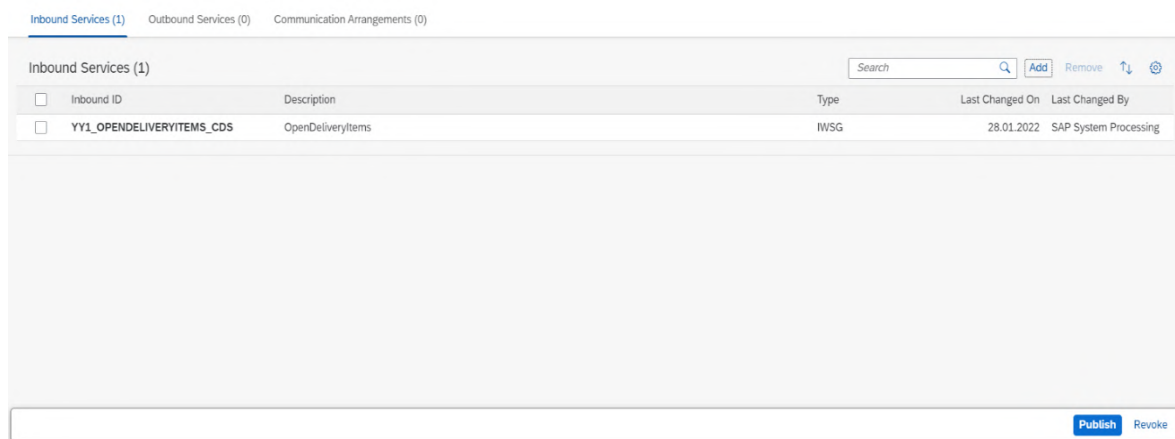
1. Login to SAP S/4HANA cloud Fiori Launchpad with required credentials.
2. Go to **Extensibility** in toolbar and click **Custom Communication Scenarios** tile.
3. Click on New button which opens pop-up window. Provide communication scenario ID as OpenDeliveryItems and description as Open Delivery Items.



4. Click on Add button in Inbound services and select required CDS **ZZ1_OPENDELIVERYITEMS_CDS** from Add services pop-up and click on OK button.



5. Click on Publish button present on Footer, it will enable the Create Arrangement button after successful publish.



6. Click on Create Arrangement button, it will navigate to new Fiori app Communication arrangement by open pop-up new communication arrangement. Click on Create button.
7. Enter Communication system and Username created in SAP S/4HANA system. Refer here to know how to create [Communication user](#) and [Communication System](#)
8. Save the Communication Arrangement and status should change to Active. For more details,

refer here how to create [Communication Arrangement](#)

9. Repeat all the above steps from 1 to 8 for below mentioned CDS.

ZZ1_customerDetails

ZZ1_CompCurrency

ZZ1_OverdueAmt

ZZ1_SalesOrder

ZZ1_CustomerEmail

ZZ1_DocumentItems

Support

There is no support available for template content. If you experience general issues with SAP Build Process Automation, please follow the links below:

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- [Test an Automation Help portal Article](#)
- [Test an Application Help portal Article](#)
- [Get traces Support Guided Answer](#)

If the issue persists, please raise an incident via SAP Support Portal on **BPI-PA-BPC** component.

This template can be modified using SAP Process Automation. For example: add decisions to determine the approver based on a certain business logic or add an action to post collected information to backend SAP system. Refer [help portal](#) for more details.

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