Setup Guide – Custom CDS Views

Manage Delivery and Billing Block in Sales Order using SAP Build Process Automation or SAP Workflow Management

THE BEST RUN **SAP**

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Overview

This document provides information about configuring the CDS Views required in the workflow content package **Manage Delivery and Billing Block in Sales Order** application.

Custom CDS View and Custom communication scenario

To call the APIs related to **Manage Delivery and Billing Block in Sales Order**, 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 details, sales order items, net value, sales organization and division used in Manage Delivery and Billing Block in Sales Order 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 Sales Order Items (YY1_SalesOrderItems)

Package Name: SAP S/4HANA Cloud for Sales
Label: SalesOrderItems
Name: YY1_SalesOrderItems

1. Login to S4HANA 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 as mentioned above. Choose **External API** option from scenario dropdown and click on button create in pop-up window.
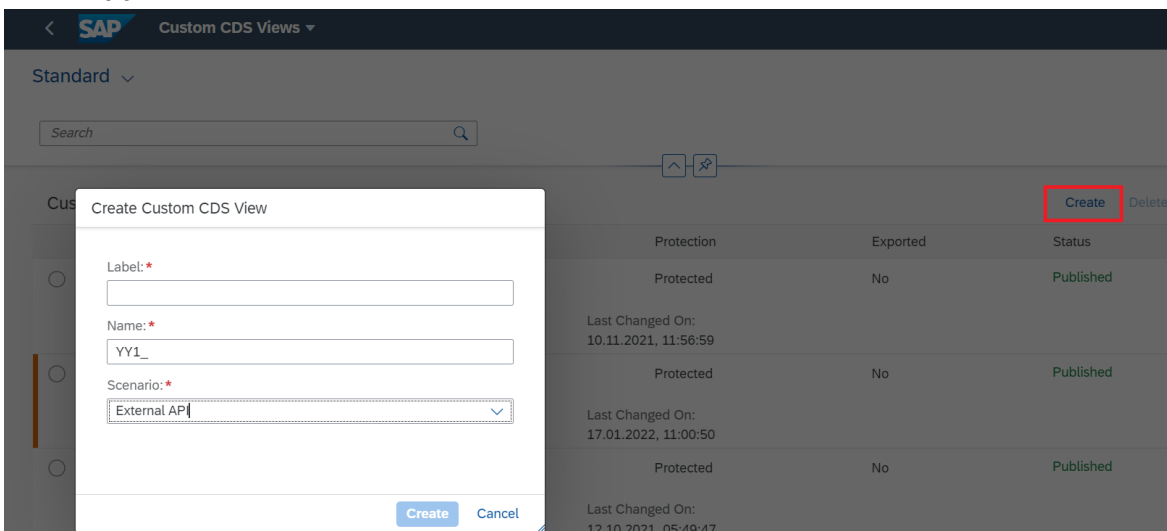
4. Select Primary Data Source, a popup will open with list of CDS Views. Provide the Standard CDS view name as I_SalesOrderItem in search field and press enter. Select the required CDS to continue.

Select: Primary Data Source

I_SalesOrderItem

Data Sources (12)

Name	Label	Source Origin	Modeling Data Source	Modeling Association Target	Analytics Data Category
I_SalesDocumentItemPartner	Sales Document Item Partner	ABAP Development Tools	✓	✓	
I_SalesOrderItem	Sales Order Item	ABAP Development Tools	✓	✓	Dimension
I_SalesOrderItemCube	Sales Order Item - Cube	ABAP Development Tools	✓		Cube
I_SalesOrderItemPartner	Sales Order Item Partner	ABAP Development Tools	✓	✓	
I_SalesOrderItemPricingElement	Sales Order Item Pricing Element	ABAP Development Tools	✓	✓	
I_SalesOrderItemStdVH	Sales Order Item	ABAP Development Tools			
I_SalesOrderPricingElement	Sales Order Pricing Element	ABAP Development Tools	✓	✓	
I_SalesOrderType	Sales Order Types	ABAP Development Tools	✓	✓	Dimension
I_SalesOrderWithoutCharge	Sales Order Without Charge	ABAP Development Tools	✓	✓	Dimension
I_SalesOrderWithoutChargeItem	Item for Sales Order Without Charge	ABAP Development Tools	✓	✓	Dimension
I_SalesOrderWithoutChargeType	Sales Order Without Charge Types	ABAP Development Tools	✓	✓	Dimension
YY1_SalesOrderItem	SalesOrderItem	Custom CDS Views			

Cancel

5. 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_ProductDescription in search field and Click "OK".

6. 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.


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

Data Source Field	Operator	Value Type	Value
Product	Equal	Field	Material
Language	Equal	Session variable	System Language

7. Go to Elements tab, click add button and select Elements from submenu and select required fields from multiple CDS click Ok button.
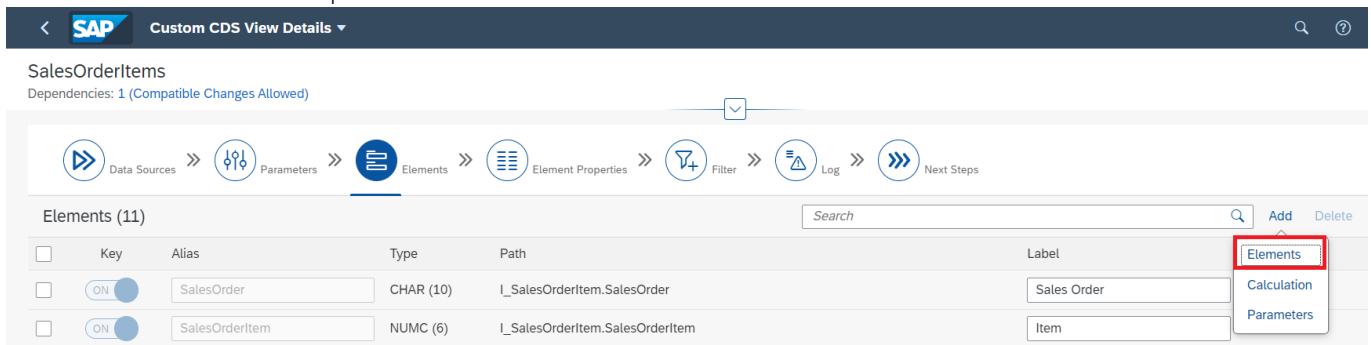
Below mentioned elements to be added.

Key	Alias	Path	Label
ON	SalesOrder	I_SalesOrderItem.SalesOrder	Sales Order
ON	SalesOrderItem	I_SalesOrderItem.SalesOrderItem	Item
OFF	Material	I_SalesOrderItem.Material	Material
OFF	OrderQuantity	I_SalesOrderItem.OrderQuantity	Order Quantity
OFF	NetAmount	I_SalesOrderItem.NetAmount	Net Value
OFF	ItemBillingBlockReason	I_SalesOrderItem._ReferenceSDDocumentItem.ItemBillingBlockReason	Billing Block
OFF	SalesDocumentRjcnReason	I_SalesOrderItem._HigherLevelItem.SalesDocumentRjcnReason	Reason for Rejection
OFF	OrderQuantityUnit	I_SalesOrderItem.OrderQuantityUnit	Sales Unit
OFF	TransactionCurrency	I_SalesOrderItem.TransactionCurrency	Document Currency
OFF	ProductName	_I_ProductText.ProductName	Product Description
OFF	ProductDescription	_I_ProductDescription.ProductDescription	Product Description
OFF	TargetQuantityUnit	I_SalesOrderItem.TargetQuantityUnit	Target Quantity UoM

OFF	OrderQuantityUnit_1	I_SalesOrderItem._HigherLevelItem.OrderQuantityUnit	Sales Unit

8. Click on Publish button present on Footer.

Creation of CDS view Sales Order Header (YY1_SalesOrderHeader)

Package Name: SAP S/4HANA Cloud for Sales
Label: SalesOrderHeader
Name: YY1_SalesOrderHeader

Repeat step 1 to 3 as mentioned above in Sales Order Items CDS
For 4th step select primary data source as I_SalesOrder as shown in Step 4 above.
For Step 5, to add multiple CDS in Data Sources tab, click on Add button and select Associated Data Sources which opens pop-up. Provide the CDS view name I_SalesOrganizationText in search field and Click "OK". Similarly add other CDS views I_DistributionChannelText, I_DivisionText, I_Customer, I_BillingBlockReasonText, I_SDDocumentReasonText, I_SalesOrderPartner, YY1_CountryName, I_SalesGroupText, I_CustomerGroupText and I_SalesOfficeText.

For Step 6, add the below join conditions

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

Data Source Field	Operator	Value Type	Value
SalesOrganization	Equal	Field	SalesOrganization
Language	Equal	Session variable	System Language

   ii)   Name: I_DistributionChannelText
           Alias: _I_DistributionChannelText
           Cardinality: Zero or One[0..*]

Data Source Field	Operator	Value Type	Value
DistributionChannel	Equal	Field	DistributionChannel
Language	Equal	Session variable	System Language

   iii)   Name: I_DivisionText
           Alias: _I_DivisionText
           Cardinality: Zero or One[0..1]

Data Source Field	Operator	Value Type	Value
Division	Equal	Field	Division
Language	Equal	Session variable	System Language

iv) Name: I_Customer
     Alias: _I_Customer
     Cardinality: Zero or One[0..1]

Data Source Field	Operator	Value Type	Value
Customer	Equal	Field	SoldToParty

v) Name: I_BillingBlockReasonText
    Alias: _I_BillingBlockReasonText
    Cardinality: Zero or One[0..1]

Data Source Field	Operator	Value Type	Value
BillingBlockReason	Equal	Field	HeaderBillingBlockReason
Language	Equal	Session variable	System Language

vi) Name: I_SDDocumentReasonText
     Alias: _I_SDDocumentReasonText
     Cardinality: Zero or One[0..1]

Data Source Field	Operator	Value Type	Value
SDDocumentReason	Equal	Field	SDDocumentReason
Language	Equal	Session variable	System Language

vii) Name: I_SalesOrderPartner
      Alias: _I_SalesOrderPartner
      Cardinality: Zero or One[0..1]

Data Source Field	Operator	Value Type	Value
SalesOrder	Equal	Field	SalesOrder
PartnerFunction	Equal	Constant value	WE

viii) Name: YY1_CountryName
       Alias: _YY1_CountryName
       Cardinality: Zero or One[0..1]

Data Source Field	Operator	Value Type	Value
SalesOrder	Equal	Field	SalesOrder
PartnerFunction	Equal	Constant value	WE

ix) Name: I_SalesGroupText
     Alias: _ I_SalesGroupText
     Cardinality: Zero or One[0..1]

Data Source Field	Operator	Value Type	Value
SalesGroup	Equal	Field	SalesGroup

Language	Equal	Session variable	System Language

x)   Name: I_CustomerGroupText
        Alias: _ I_CustomerGroupText
        Cardinality: Zero or One[0..1]

Data Source Field	Operator	Value Type	Value
CustomerGroup	Equal	Field	CustomerGroup
Language	Equal	Session variable	System Language

xi)   Name: I_SalesOfficeText
        Alias: _ I_SalesOfficeText
        Cardinality: Zero or One[0..1]

Data Source Field	Operator	Value Type	Value
SalesOffice	Equal	Field	SalesOffice
Language	Equal	Session variable	System Language

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

Key	Alias	Path	Label
ON	SalesOrder	I_SalesOrder.SalesOrder	Sales Order
OFF	CreatedByUser	I_SalesOrder.CreatedByUser	Created By
OFF	CreationDate	I_SalesOrder.CreationDate	Created On
OFF	LastChangedByUser	I_SalesOrder.LastChangedByUser	Last Changed By
OFF	LastChangeDate	I_SalesOrder.LastChangeDate	Changed on
OFF	SalesOrganization	I_SalesOrder.SalesOrganization	Sales Organization
OFF	DistributionChannel	I_SalesOrder.DistributionChannel	Distribution Channel
OFF	OrganizationDivision	I_SalesOrder.OrganizationDivision	Division
OFF	SalesGroup	I_SalesOrder.SalesGroup	Sales Group
OFF	SoldToParty	I_SalesOrder.SoldToParty	Sold-to Party
OFF	SalesOrderDate	I_SalesOrder.SalesOrderDate	Document Date
OFF	SDDocumentReason	I_SalesOrder.SDDocumentReason	Order Reason
OFF	PurchaseOrderByCustomer	I_SalesOrder.PurchaseOrderByCustomer	Customer Reference
OFF	TotalNetAmount	I_SalesOrder.TotalNetAmount	Net Value
OFF	HeaderBillingBlockReason	I_SalesOrder.HeaderBillingBlockReason	Billing Block
OF	SalesOrderApprovalReaso	I_SalesOrder.SalesOrderApprovalReason	Apprvl Req.

F	n		Rsn ID
OFF	TotalBlockStatus	I_SalesOrder.TotalBlockStatus	Overall Block Status
OFF	TransactionCurrency	I_SalesOrder.TransactionCurrency	Document Currency
OFF	DeliveryBlockReason	I_SalesOrder.DeliveryBlockReason	Delivery Block
OFF	RequestedDeliveryDate	I_SalesOrder.RequestedDeliveryDate	Requested Delivery Date
OFF	SalesOrganizationName	_I_SalesOrganizationText.SalesOrganizationName	Sales Organization Description
OFF	DistributionChannelName	_I_DistributionChannelText.DistributionChannelName	Distribution Channel Description
OFF	DivisionName	_I_DivisionText.DivisionName	Division Description
OFF	CustomerName	_I_Customer.CustomerName	Name of Customer
OFF	SalesDocApprovalStatus	I_SalesOrder.SalesDocApprovalStatus	Approval Status
OFF	BillingBlockReasonDescription	_I_BillingBlockReasonText.BillingBlockReasonDescription	Billing Block Desc.
OFF	SDDocumentReasonText	_I_SDDocumentReasonText.SDDocumentReasonText	Description
OFF	Customer	_I_SalesOrderPartner.Customer	Customer
OFF	AddressID	_I_SalesOrderPartner.AddressID	Address Number
OFF	FullName	_I_SalesOrderPartner.FullName	FullName
OFF	CountryName	_YY1_CountryName.CountryName	Country/Region Name
OFF	Country	_YY1_CountryName.Country	Country/Region Key
OFF	SalesGroup	I_SalesOrder.SalesGroup	Sales Group
OFF	CustomerGroup	I_SalesOrder.CustomerGroup	Customer Group
OFF	SalesOffice	I_SalesOrder.SalesOffice	Sales Office
OFF	SalesOfficeName	_I_SalesOfficeText.SalesOfficeName	Sales Office Description
OFF	CustomerGroupName	_I_CustomerGroupText.CustomerGroupName	Description
OFF	SalesGroupName	_I_SalesGroupText.SalesGroupName	Sales Group Description

Repeat step 8 by publishing CDS View

Creation of CDS View Sales User (YY1_SalesUser)

Package Name: SAP S/4HANA Cloud for Cross Applications
Label: SalesUser

Name: YY1_SalesUser

Repeat step 1 to 3 as mentioned above in Sales Order Items CDS
For 4th step, select primary data source as I_BusinessUserBasic as shown in Step 4 above.
Step 5 and 6 is not required as it's a single data source.
Repeat step 7 by selecting required fields in Elements tab as shown in below table

Key	Alias	Path	Label
ON	BusinessPartner	I_BusinessUserBasic.BusinessPartner	Business Partner
OFF	CreatedByUser	I_BusinessUserBasic.CreatedByUser	Created By
OFF	CreationDate	I_BusinessUserBasic.CreationDate	Created On
OFF	FirstName	I_BusinessUserBasic.FirstName	First Name
OFF	LastChangeDate	I_BusinessUserBasic.LastChangeDate	Changed on
OFF	LastChangedByUser	I_BusinessUserBasic.LastChangedByUser	Changed by
OFF	LastName	I_BusinessUserBasic.LastName	Last Name
OFF	PersonFullName	I_BusinessUserBasic.PersonFullName	Description
OFF	UserID	I_BusinessUserBasic.UserID	User ID

Repeat step 8 by publishing CDS View

Creation of CDS View Customer Country details (YY1_CustomerCountry)

Package Name: SAP S/4HANA Cloud for Sales
Label: CustomerCountry
Name: YY1_CustomerCountry

Repeat step 1 to 2 as mentioned above in Sales Order Items CDS.
For 3rd step select **Standard CDS** option from dropdown while creating the CDS view, as shown in Step 3 above.
For 4th step select primary data source as I_SalesOrderPartner as shown in below screen shots.
For step 5, select I_Customer as Associated data source.
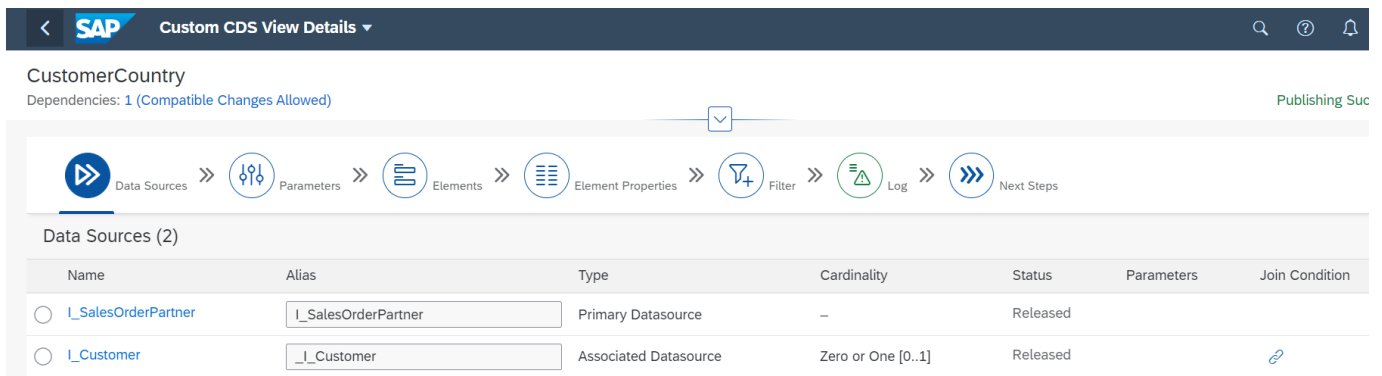
For step 6, use below join condition.
Name: I_Customer
Alias: _I_Customer
Cardinality: Zero or One[0..1]

Data Source Field	Operator	Value Type	Value
Customer	Equal	Field	I_SalesOrderPartner.Customer

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AddressID	Equal	Field	I_SalesOrderPartner.AddressID

Select Filter tab and add Filter condition

Data Source Field	Operator	Value Type	Value
I_SalesOrderPartner.PartnerFunction	Equal	Constant Value	WE

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

Key	Alias	Path	Label
ON	SalesOrder	I_SalesOrderPartner.SalesOrder	Sales Order
ON	PartnerFunction	I_SalesOrderPartner.PartnerFunction	Partner Function
OFF	AddressID_1	_I_Customer.AddressID	Address
OFF	Customer_1	_I_Customer.Customer	Customer
OFF	CustomerName	_I_Customer.CustomerName	Name of Customer
OFF	AddressID	I_SalesOrderPartner.AddressID	Address Number
OFF	Customer	I_SalesOrderPartner.Customer	Customer
OFF	Country	_I_Customer.Country	Country/Region Key
OFF	_PartnerFunction	I_SalesOrderPartner._PartnerFunction	_PartnerFunction
OFF	_SalesOrder	I_SalesOrderPartner._SalesOrder	_SalesOrder

Repeat step 8 by publishing CDS View

Creation of CDS View Country Name (YY1_CountryName)

Package Name: SAP S/4HANA Cloud for Cross Applications
Label: CountryName
Name: YY1_CountryName

Repeat step 1 to 2 as mentioned above in Sales Order Items CDS.
For 3rd step select **Standard CDS** option from dropdown while creating the CDS view, as shown in Step 3 above.
For 4th step select primary data source as YY1_CustomerCountry as shown in below screen shots.
For step 5, select I_CountryText as Associated data source.

For step 6, use below join condition.
Name: I_CountryText

Alias: _I_CountryText
Cardinality: Zero or One[0..1]

Data Source Field	Operator	Value Type	Value
Country	Equal	Field	YY1_CustomerCountry.Country
Language	Equal	Session variable	System Language

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

| Key	Alias	Path	Label
ON	SalesOrder	YY1_CustomerCountry.SalesOrder	Sales Order
ON	PartnerFunction	YY1_CustomerCountry.PartnerFunction	Partner Function
OFF	CountryName	_I_CountryText.CountryName	Country/Region Name
OFF	Country	_I_CountryText.Country	Country/Region Key
OFF	_PartnerFunction	YY1_CustomerCountry._PartnerFunction	_PartnerFunction
OFF	_SalesOrder	YY1_CustomerCountry._SalesOrder	_SalesOrder
OFF	_Country	_I_CountryText._Country	_Country

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 SalesOrderItems and description as Sales Order Items.
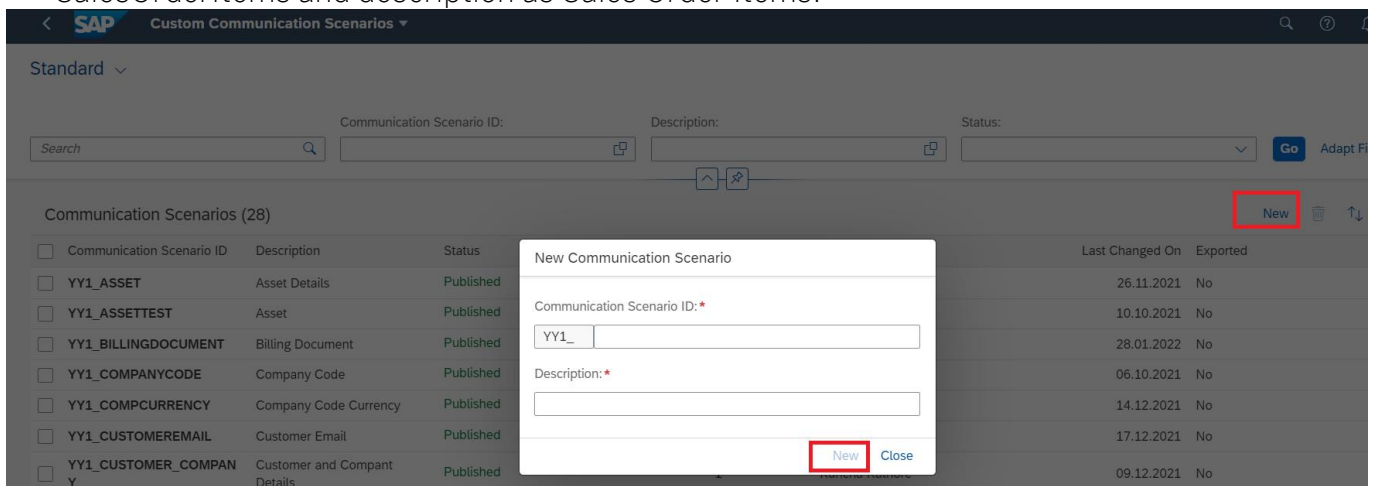

4. Click on Add button in Inbound services and select required CDS **YY1_SALESORDERITEMS_CDS** from Add services pop-up and click on OK button.
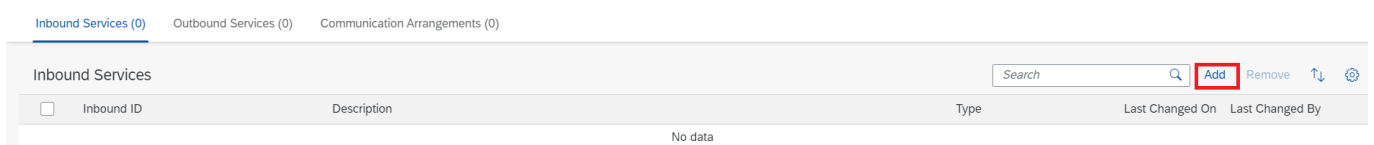
5. Click on Publish button present on Footer, it will enable the Create Arrangement button after successful publish.

| Inbound Services (1) | Outbound Services (0) | Communication Arrangements (1) | | | | |

Inbound Services (1)

	Inbound ID	Description	Type	Last Changed On	Last Changed By
☐	YY1_SALESORDERITEMS_CDS	SalesOrderItems	IWSG	16.02.2022	SAP System Processing

Search 🔍 Add Remove ↑↓ ⚙

Publish Revoke

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.

‹ **SAP** **Custom Communication Scenarios** ▾

SalesOrderItems   Check   Create Arrangement   Open with Extensibility Inventory
YY1_SALESORDERITEMS

New Communication Arrangement

Scenario: *
YY1_SALESORDERITEMS   🗗

Arrangement Name:
YY1_SALESORDERITEMS

Create   Cancel
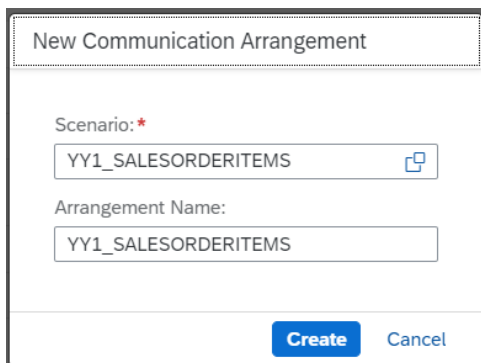
7. Enter Communication system and Username created in SAP S/4HANA system. Refer here to know how to create Communication user and Communication System
8. Save the Communication Arrangement and status should change to Active. For more details, refer here how to create Communication Arrangement
9. **Repeat all the above steps from 1 to 8 for below mentioned CDS.**
   YY1_SalesOrderHeader
   YY1_SalesUser