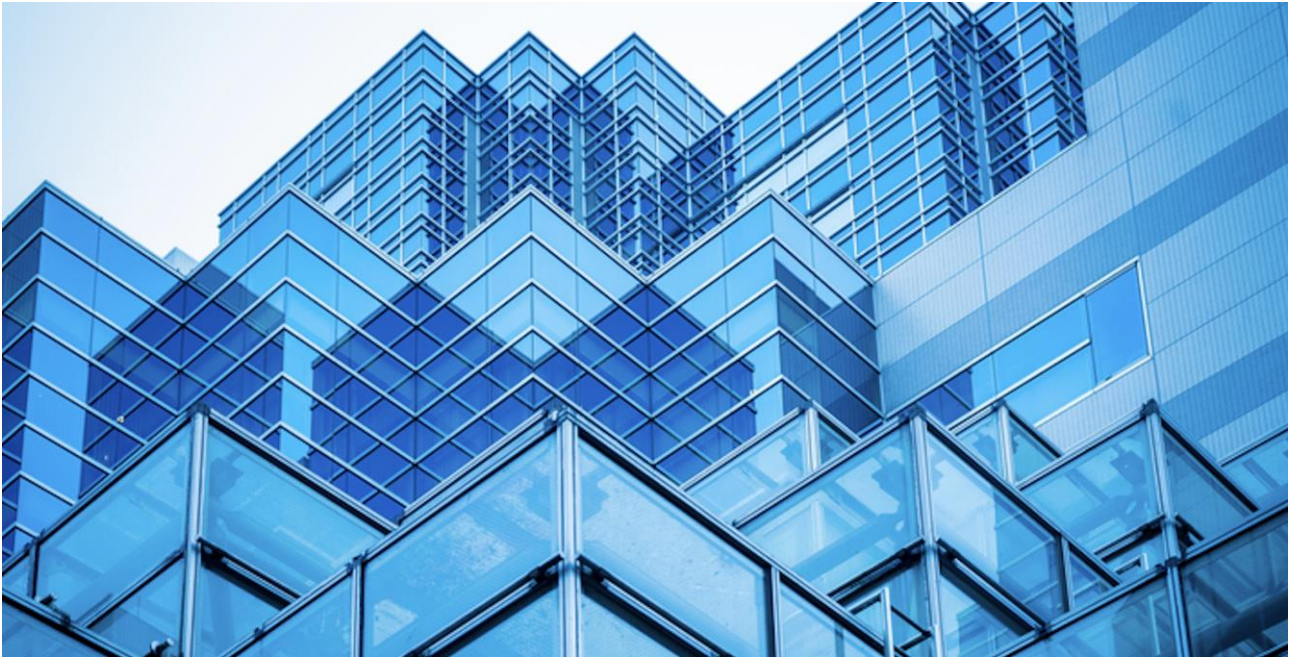




PUBLIC

SAP Build Process Automation

Mass Maintenance of Sales Contracts Configuration & User Guide

Contents

Change Log	3
Overview	4
Prerequisites	7
Other Prerequisites	7
Configuration Guide	9
Setup SAP Business Technology Platform Cockpit	9
Destination Configuration	9
SAP S/4HANA Cloud, public edition Destination	9
SAP Build Process Automation Email Destination	10
Document Management Destination	10
User Roles Configuration	10
Setup SAP Build Process Automation Content	11
Import Content	11
Configuration & Modification	11
Configure Automation Trigger	11
Configure Process	12
Configure Forms (Optional)	12
Configure Decisions	13
Configure Email	14
Configure Process Visibility (Optional)	16
Release and Deploy Process	17
Configure SAP Work Zone	18
User Guide	19
Forms	21
Actions	22
Decisions	23
Email Notifications	24
Automations	25
Process Conditions	29
Process Visibility Scenario	29
Dependencies	31
Technical Dependencies	31
Support	31

Change Log

Version	Date	Description
1.0.0	Aug 21 st , 2023	Document created

This document contains following 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 BTP that are required to use this template.
2. **Configuration Guide:** It contain sections which will guide you to setup your (a) SAP BTP Account with destination user roles etc, (b) Import and configure the template using SAP Build Process Automation design studio and (c) SAP Work Zone to access the MyInbox 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.

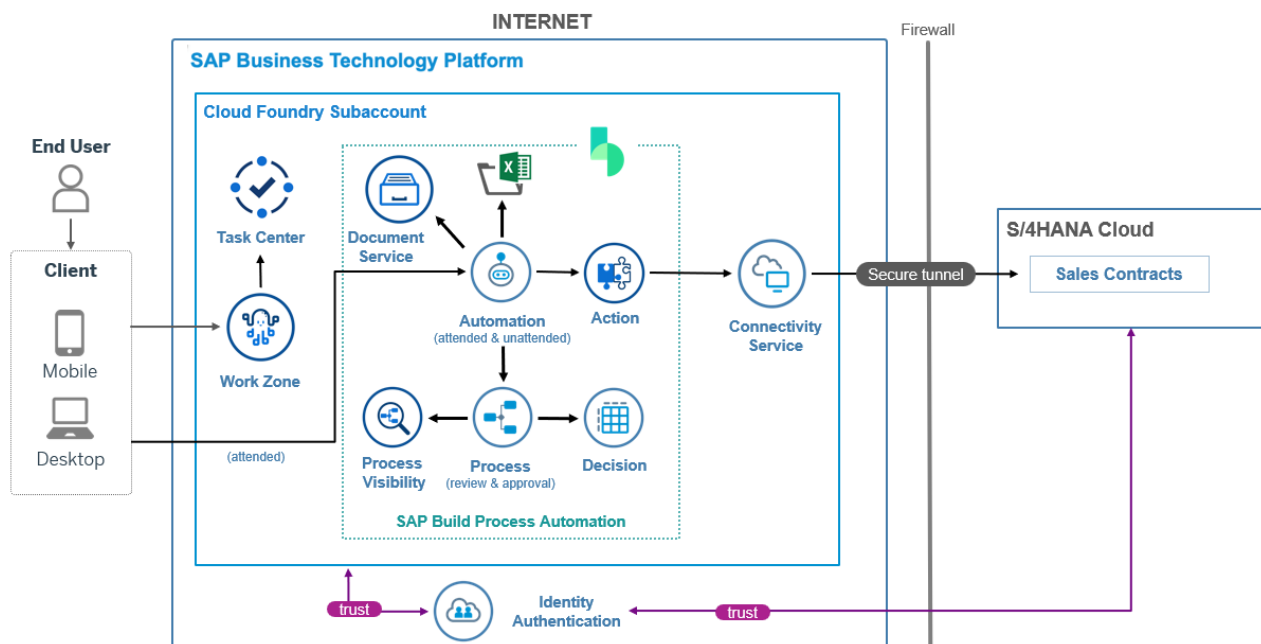
Notes:

- This documentation is not a detailed guide to setup SAP BTP services. It assumes that IT admin who is setting the content is skilled with SAP BTP environment. Configuration section must be mandatorily followed to import and configure the template.
- This template content is to accelerate your solution development. You can 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 and its capabilities.

Overview

The Mass Maintenance of Sales Contracts template enables business experts to accelerate the automation and creation/update of Sales Contracts in a transparent approach and provide flexibility to meet business requirements. It includes processes, decisions, automation, and visibility scenario content.

This Mass Maintenance of Sales Contracts template automates the creation and update of sales contracts. As sales contract need to be updated or created ad-hoc, on-demand, it is more time-efficient for the users to provide excel template with the necessary data using a bot, instead of performing it individually in SAP S/4HANA system. This template provides the approval flow for sales contract data & covers the capability to retrieve required Sales Contract data and update or creation of sales contract in SAP S/4HANA public cloud system.



The following is the brief overview about the functioning & features of **Mass Maintenance of Sales Contract** template:

- This template utilizes SAP S/4HANA Sales Contract (AX2) API([Check Here](#)) with the help of action project.
- This package provides automation for fetching the sales contract details with the help of selection excel file (**InputSelectionScreen.xlsx**) that allows user to provide details about Sales Contract for which details need to be fetched from S/4HANA.
 - After successful completion of “**Get Sales Contract from S/4HANA**” automation, it reads the selection excel file and retrieves the sales contract data from S/4HANA system that are listed in the excel file. The Input Template file (**InputTemplate.xlsx**) is populated with the fetched data and new files are created with name: **InputTemplate_<Timestamp>.xlsx**. The file is then saved in the folder named **fetchedData**.

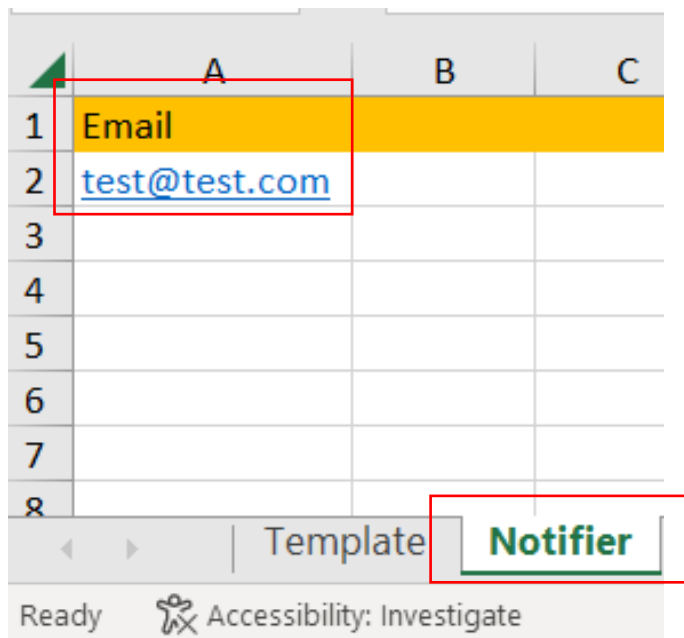
(Please refer to sections “**Other Prerequisites**” and “**Configure Automation Trigger**” for more details)

- This automation also updates the log records as **SalesContract_Log_<Timestamp>.xlsx** file in the same **FetchedData** folder and notifies the requester through email about the completion of the operation along with details of file path.
- This package also provides automation to perform create or update operation on specific Sales Contract with the help of input template file (**InputTemplate.xlsx**):
 - “**Create or Update Sales Contract**” automation reads the Input template files (**InputTemplate.xlsx**) from **ToBeProcessed** folder & sends the Sales Contract data for the approval to the determined approver based on the decision. After completion of approval requested operation is performed.
 - If the provided details are for create (letter “C” in the “Create/Update” column), then create operation is performed and requestor is informed through email based on the response from the action with adequate message.

- If the provided details are for update (letter “U” in the “Create/Update” column), then update happens in the given sales contract header & items details and requestor is informed based on the response from the action with adequate message containing execution response details.
- Once all sales contracts from specific input template file are processed, the requestor is notified through email about the successful completion of the provided file. Automation then moves the processed file to another folder with name **Processed**.
- All required templates files are provided in the *Templates* folder and attached with this package.

Notes:

- The template can also work in collaboration with the [Business Document Extraction from Email \(70U\) bot](#) available in the SAP Build Store. The config file attached to 70U content package(70UConfig.xlsx) can be used and placed in the folder as shown in the folder structure mentioned below in the prerequisites section.
- In the case of files fetched using the 70U package, the input template must be edited to add an additional sheet names ‘Notifier’ with the email id of the person to be notified in the cell A2.



	A	B	C
1	Email		
2	test@test.com		
3			
4			
5			
6			
7			
8			

Ready Accessibility: Investigate

Template Notifier

Prerequisites

The following SAP Business Technology Platform services are required to consume the content package Mass maintenance of Sales Contracts:

- SAP Build Process Automation to orchestrate the process.
- SAP Cloud Identity Services - Identity Authentication
- SAP S/4HANA Cloud
- SAP Business Technology Platform, Cloud Foundry runtime
- SAP Document Management Service to store attachments needed for approvals.
- SAP Work Zone, standard or advanced edition for accessing My Inbox and Process Visibility workspaces.

Other Prerequisites

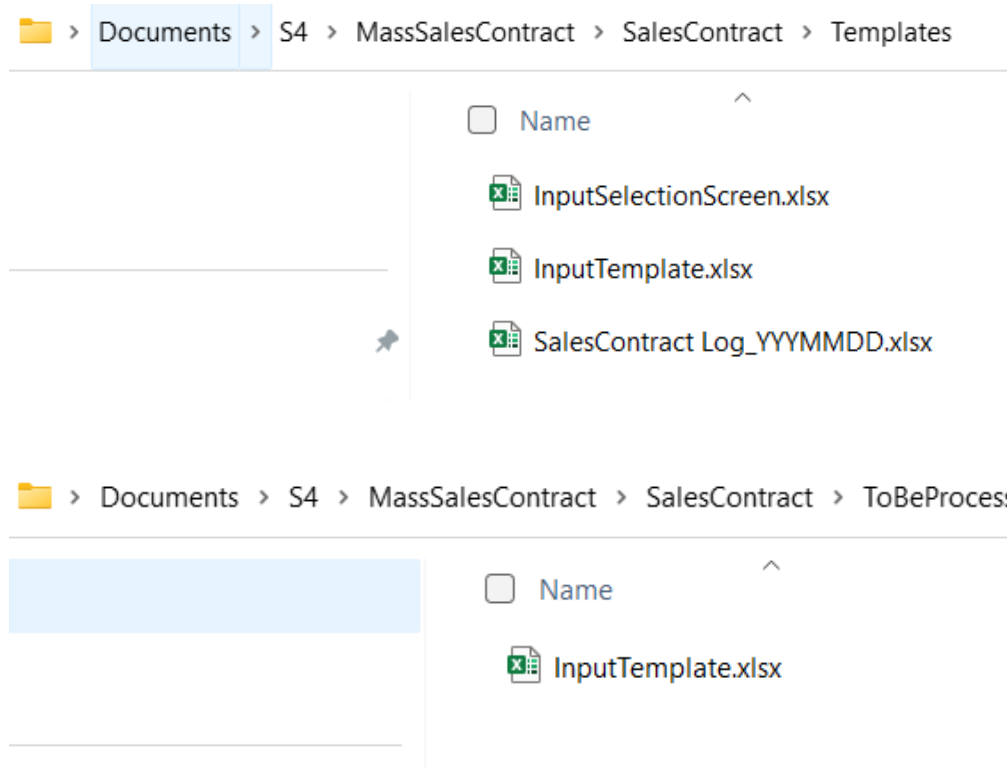
For this template to run successfully the following other prerequisites are needed:

- SAP Desktop Agent 3.17 or higher
- Outlook mailbox configured on the system where the update/create automation will run in unattended mode to send mails with attachments.
- The S/4HANA Communication User must have the **INTERNAL_SALES_REP** role.

Following snippets shows the folder structure that is utilized by this package & required template files are included in this package:

📁 > Documents > S4 > MassSalesContract > SalesContract

☐ Name	Date modified	Type
📁 FetchedData	22-08-2023 13:47	File folder
📁 Processed	22-08-2023 12:15	File folder
▶ 📁 Templates	22-08-2023 13:45	File folder
▶ 📁 ToBeProcessed	22-08-2023 12:15	File folder



Notes:

- This package is designed only to work with the provided folder structure & input template file structures. DONOT CHANGE any column properties and structure.
 - o If any changes done in the input template structure, related process & automation implementation also need to be updated to handle those changes.
- **Template** folder contains the required template files that includes:
 - o InputSelectionScreen.xlsx – This is used for fetching sales contract details from S/4HANA system based on given filter values.
 - o InputTemplate.xlsx – It contains the input data template with all the required properties and description.
 - o SalesContract Log_YYMMDD.xlsx – This is used for keeping record of log details about sales contract header and items count.
- **ToBeProcessed** folder contains the input data file with sales contract details for creation or update in S4HANA system.
- **FetchData** folder gets updated with the updated log record and fetched data from fetch request to S/4HANA.
- **Processed** folder contains the input data files from *ToBeProcessed* folder whose content have been processed completely and have been sent for the approval for creation or update of sales contracts.

Configuration Guide

Setup SAP Business Technology Platform Cockpit

Destination Configuration

Destinations are used in the template to connect to different system & services. This sub-section guides you to create various destinations in the SAP BTP Cockpit.

SAP S/4HANA Cloud, public edition

To access the S/4HANA system for read and update operations, an HTTP destination is required in the SAP BTP account where the SAP Build Process Automation is subscribed. The API used can be found [here](#)

- Create a destination with Basic Authentication.
 - Make sure the communication user has the appropriate communication strategy to edit sales orders assigned to it in the S/4HANA system.

Destination with Basic Authentication

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

Additional Properties to Destination

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

sap.applicationdevelopment.actions.enabled	true
sap.processautomation.enabled	true

SAP Build Process Automation Email

Configure email destination which will be used to send email to the approver, requestor, and admin at different staged of the process execution.

Follow the steps to [Configure a SMTP Mail Destination](#) in your BTP account.

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

Document Management Service

In this template, the Input Template document for Sales Contract and any supporting documents can be uploaded in the approval form which are then made available as attachments for review and approval to the respective participants. To upload the document from the form, you will need SAP Document Management Service or equivalent CMIS repository and a corresponding destination in SAP BTP to connect to the repository.

Follow the instructions to [Configure SAP Document Management Service for Attachments](#)

Note: The destination needs to be created with **sap_process_automation_document_store** name.

IMPORTANT NOTE: This template content is to accelerate your solution development. You can modify this template according to your own requirements to achieve your business goals. To use this template content, you need to have basic knowledge and understanding of SAP Build Process Automation and its capabilities.

User Roles Configuration

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

Role Name	Purpose
ProcessAutomationDeveloper	To fully use this content package, you need to have an active user entitled to this role to use SAP Build Process Automation.
TaskCenterAdmin	Permission to execute calls to the Connector Status API and monitor configured destinations and running background jobs.

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

Setup SAP Build Process Automation Content

Import Content

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 **"Process Automation"**.
- 3) In the Search bar type **"Mass Maintenance of Sales Contract"**
- 4) Select the "Create from Template" button to add the template into you lobby.
- 5) After successfully adding the template, navigate back to the lobby to find the "Mass Maintenance of Sales Contract" template available for use.

After successfully adding the template, navigate back to the lobby to find the "Mass Maintenance of Sales Contract template available for use.

Caution: Be sure to select the **Project Type** as **"Process Automation"** in the filters.

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, and then release and deploy from the Lobby.

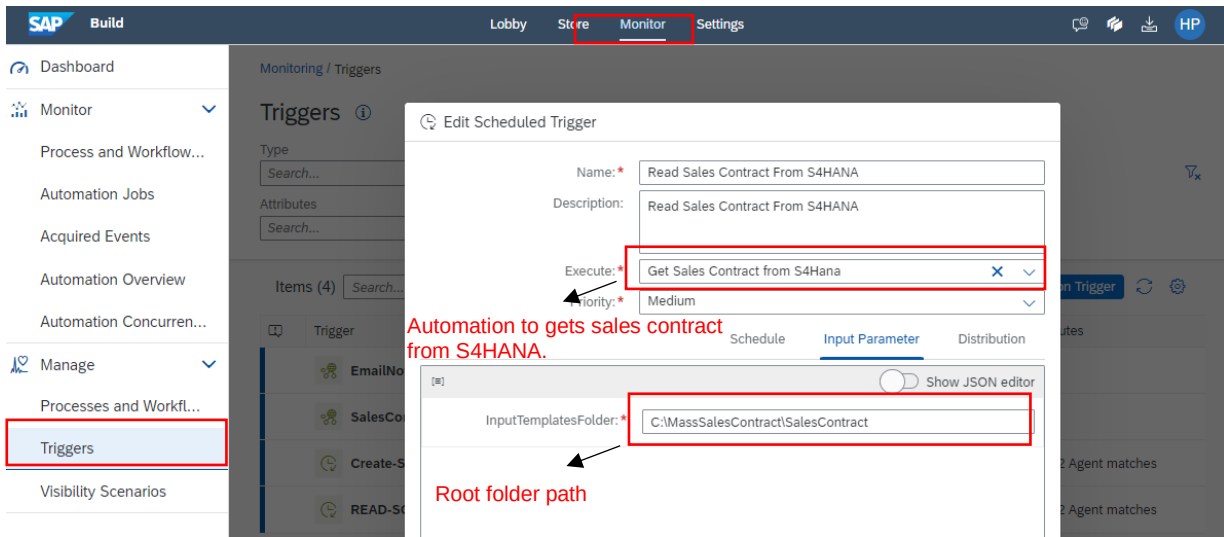
Configure Automation Trigger

This package contains 2 main automations that need to be triggered if you want to fetch the data from S4HANA or want to create or update new Sales Contract in S4HANA system.

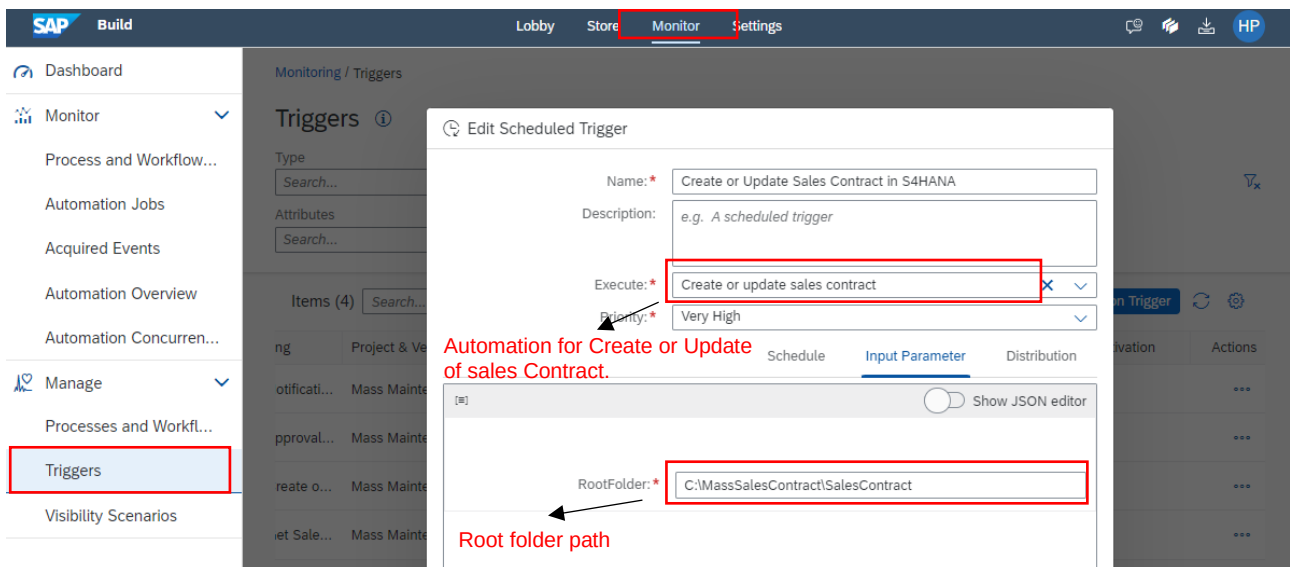
Automations can be triggered in different modes; followings are few of the provided execution modes:

- Unattended mode. For more information click [here](#)
- Attended mode. For more information click [here](#)

Following input parameter needs to be provided for triggering automation **"Get Sales Contract from S/4HANA"**:



Following input parameter needs to be provided for triggering automation “**Create or Update Sales Contract**”:



For more details on input parameters and root folder please refer to the “**overview**” and “**Other Prerequisite sections**”.

Configure Process

This package contains the subprocesses “**Approval Process for Sales Contract**” and “**Notification about fetched data & log record**” & it does not need to be explicitly configured. It can be directly utilized after successful deployment.

Configure Forms (Optional)

This template contains multiple forms. You can update or extend the forms based on your requirements. To edit the form:

- Double click the form to open the Form Editor
- You can configure existing fields or add new layout or input fields to the form by simply dragging-and-dropping them from the side menu.

Following snapshot shows one form (Approval Request) with required sales contract details for approver to review & provide approval:

The screenshot shows the SAP Form Editor interface. On the left, a sidebar menu contains various form elements: Headline 1, Headline 2, Paragraph, Text, Text Area, Dropdown, Choice, Checkbox, Number, Date, File, Table, and Link. The main area displays the 'Approval Form - Sales Contract' template. It includes a 'Sales Contract Item Details' section with a table for 'Sales Contract Item Details' containing columns for SalesContractItem, Material, isApproved, and Comment. A red box highlights the sidebar menu, and a red arrow points to the table with the text 'Additional details can be added to the form by dragging needed values.'

Configure Decisions

This template includes two decisions:

- Determine Approver
- Determine Process Admin

This decision can be modified for different conditions and result values based on your business policies and requirements. To modify the decision:

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

Determine Approver

Description: Decision to determine approver details

Inputs/Output Rules Variables

Input Parameters

Name *	Description *	Type *	List
SalesContractPayload	SalesContractPayload	SalesContractPa...	☐ ☒

[Add Input Parameter](#)

Output Parameter

Name *	Description *	Type *	List
ApproverEmail	Approver Email	ApproverDetails	☐ ☒

[Add Output Parameter](#)

- Edit the rule to add more rows or update existing values:

Determine Approver

Description: Determines approver details if approval is needed based on Sales Contract details

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

Decision Table

if	Then
SalesOrganization = '1010'	ApproverEmail = 'test@test.com' ApprovalRequired = true

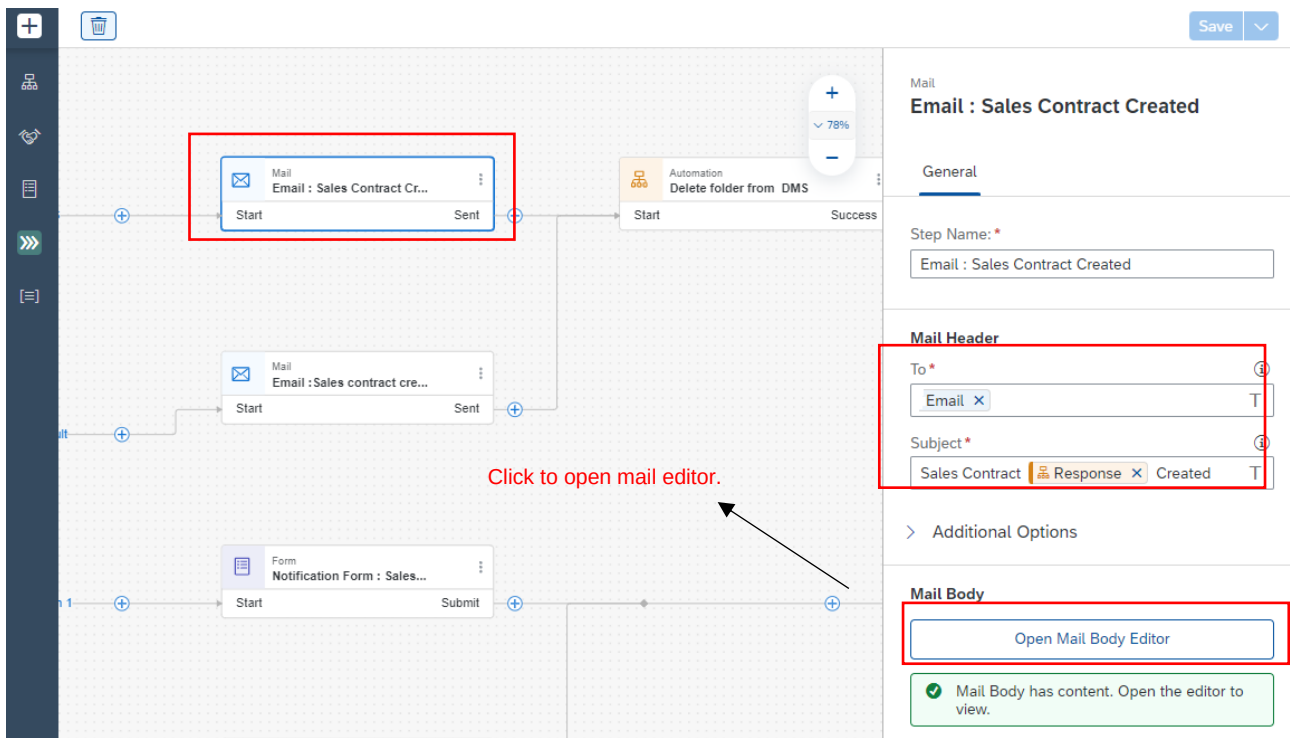
[Add Row](#) [Delete Row](#) [Copy Row](#) [Cut Row](#)

Configure Email

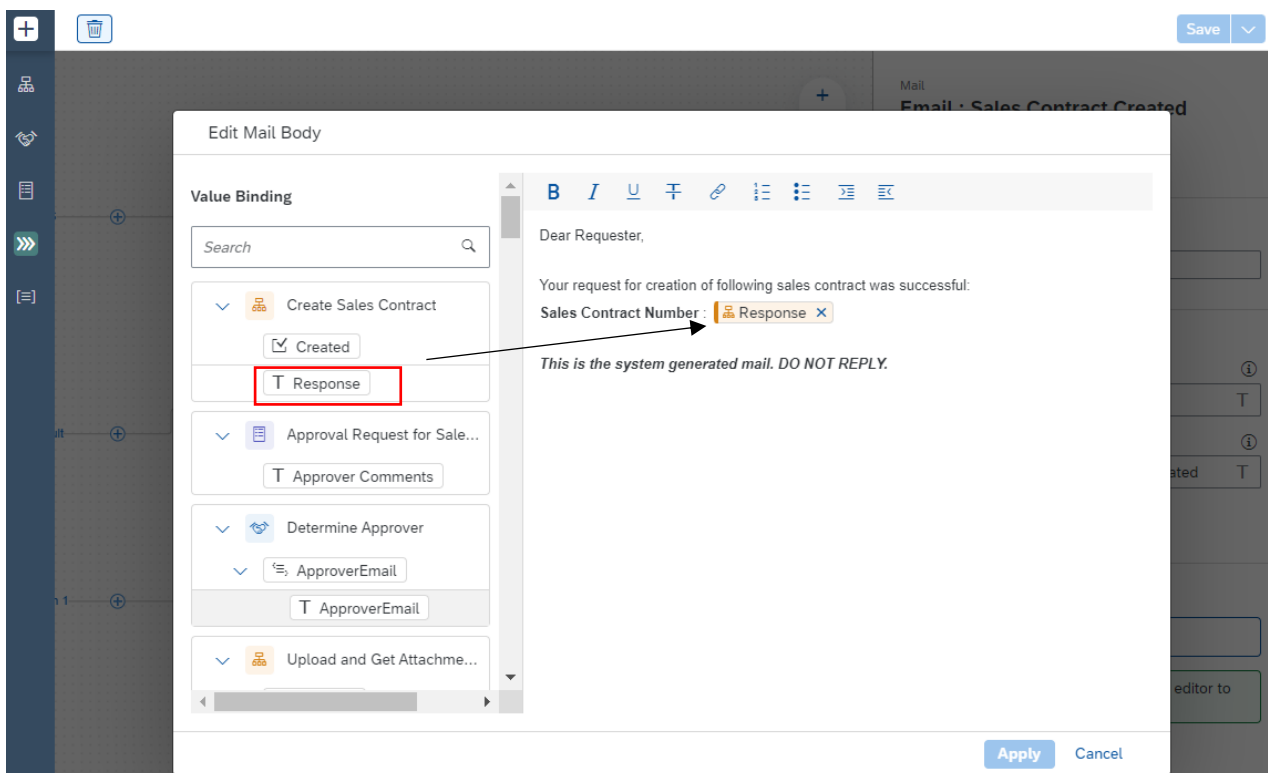
Email notifications are sent to requestor, approver, and admin at different places during process execution. All the email artefacts in the process have default template body which can be changed.

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.
- Click to **'Open Mail Body Editor'**.



- 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.



Configure Process Visibility (Optional)

This template has a pre-built dashboard with default business KPIs that can be used by the business users to track end-to-end processes in real-time. You can add more KPIs based on your business requirements.

To configure the visibility scenario:

- Open project '**Overview**' tab
- Select **Mass Maintenance of Sales Contract** (Visibility Scenario)
- Explore and change Phases, Attributes, Performance Indicators etc.
[Follow the documentation to learn how to configure process visibility scenario](#)

In case you don't have access to the process visibility workspace where you can access the newly created dashboards, please contact your IT admin.

Configure Destination Settings

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

For this package following two destination needs not be configured in the SAP BTP cockpit:

- **sap_document_management_service**
- : To handle document attachment using Document Management Service.
- **sap_s4hana_sales_contract**
- : To provide API access to S4/HANA public cloud.

Note: Above destination names are the sample destination names configured in BTP & can be named as per project requirement.

To configure destination,

- click on **Settings**.
- Select **Destinations** from the left panel.
- Click **New Destination**
- Select these destinations to be added (Created in the above section).

The screenshot shows the SAP Build interface with the 'Settings' tab selected in the top navigation bar. On the left sidebar, 'Destinations' is highlighted. The main area displays the 'Destinations' page with a search bar containing 'sap_document'. A table lists the destinations, with 'sap_document_management_service' highlighted. An arrow points from this entry to the 'New Destination' button. The table has columns: Name & Description, Type, Host, Authentication Type, and Actions.

Name & Description	Type	Host	Authentication Type	Actions
sap_document_management_service	HTTP	https:...	BasicAuthentication	[Icon]

The screenshot shows the SAP Build interface with the 'Settings' tab selected. On the left sidebar, 'Destinations' is highlighted. The main area displays the 'Destinations' page with a search bar containing 'sap_s4hana'. A table lists the destinations, with 'sap_s4hana_sales_contract' highlighted. The table has columns: Name & Description, Type, Host, Authentication Type, and Actions.

Name & Description	Type	Host	Authentication Type	Actions
sap_s4hana_sales_contract	HTTP	https:...	BasicAuthentication	[Icon]

Release and Deploy Process

The package needs to be released & deployed after required configurations to trigger the automation execution for process flow for approval & execution of required operations such as read, create/update of Sales Contract in S4/HANA public cloud.

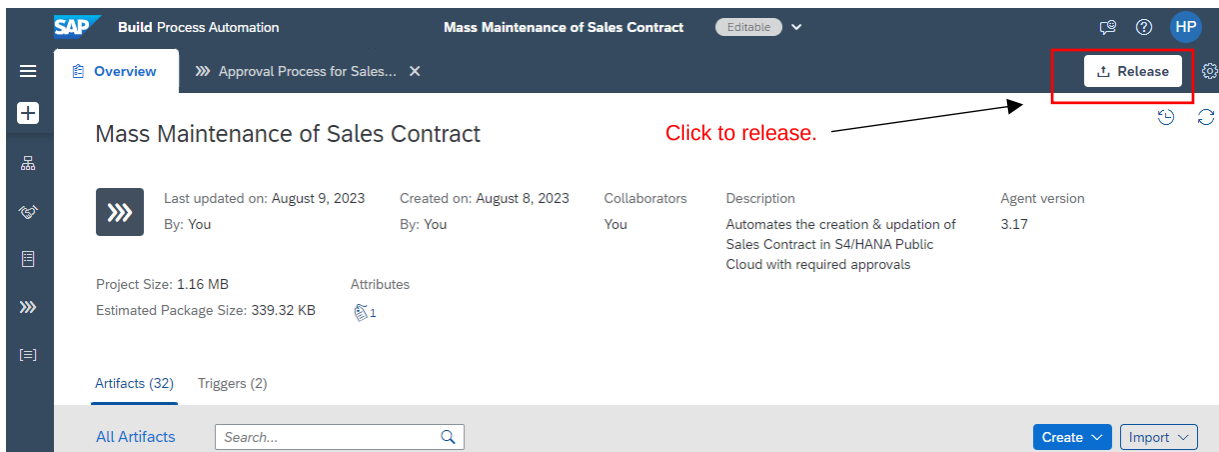
Release

The release of package locks the version of your process & no further modifications are allowed on that version of the package. This released version of the package can be used to deploy the package.

To release a version of your process:

- Ensure that the status is listed as '**Editable**'.
- The click '**Release**'

First release of the package is versioned as 1.0.0. All the subsequent release version gets updated version number & you can select from the released versions of the package to deploy any specific version.



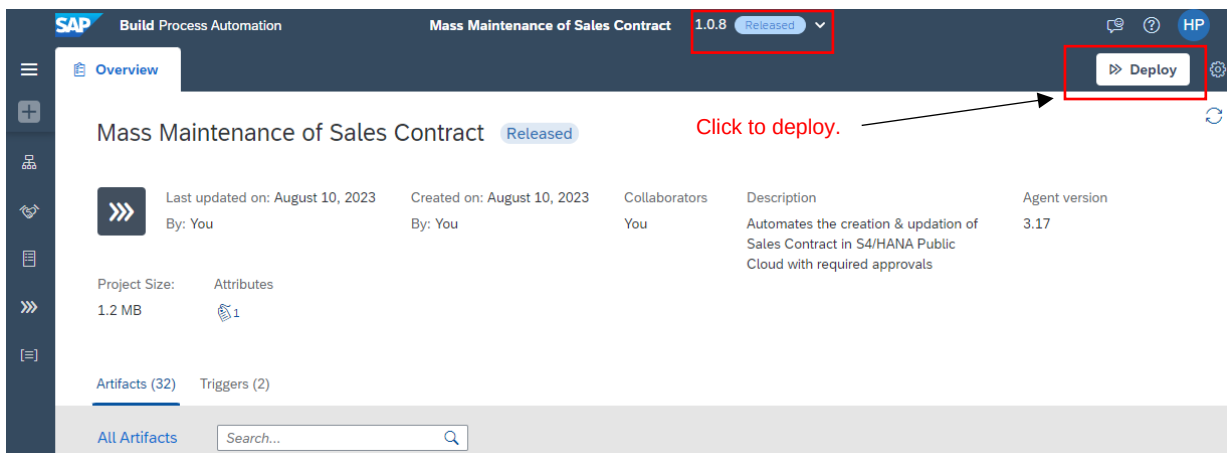
If this is the first time you've released the process, a version labelled 1.0.0 is released. For subsequent releases, you're prompted to select a version type before the process is released.

Deploy

The deployed package makes process & automations available to be consumed by user. The package automation can be triggered with required configuration from tools triggers section. The approval process available in the package can be triggered by execution of 'Create or Update Sales Contract' automation.

To deploy a released version of your process:

- Ensure that the status is listed as '**Released**'.
- Then click '**Deploy**':



While deploying the package you will be prompted to provide a Destination as an environment variable. Select the destination from the drop-down, this will be the destination you might have already configured in the section '**Configure Destination Settings**'.

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

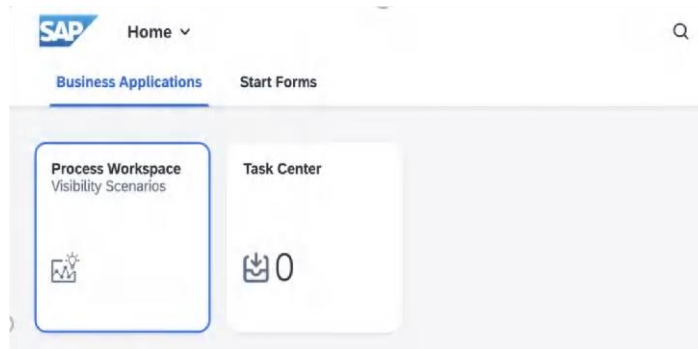
For more details about the Destination artefact, please read our [documentation](#).

Configure SAP Work Zone

Now that the process is released and deployed, you can configure **SAP Work Zone standard or advanced edition** to give access to your business users to (a) start the process and (b) track the process and business KPIs using process visibility workspace.

You can refer following links to configure SAP Work Zone standard edition:

- [Follow the documentation to configure start form in Work Zone](#)
- [Follow the tutorial to configure Work Zone with visibility tiles](#)



User Guide

Capabilities

This sample content contains the following elements as key artifacts (detailed explanation with snapshots also provided in later section of the document):

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

Icon	Type	Name	Description
	Sub Process	Approval Process for Sales Contract	This is the approval process triggered for the sales contract to be created or updated in S4/HANA public cloud
	Form	Notification Form: Approval Rejection	Notification form that provides the Sales Contract details with rejection reasons to the requester
	Form	Approval Request for Sales Contract	Approval form to the required approver(s) with sales contract details
	Form	Notification Form: Sales Contract Update Status	Notification form with update status of sales contract header & item.
	Form	Admin Notification Form	Notification form for the admin to provide required approver email

	Automation	Get Sales Contract from S4HANA	Automation that makes fetch request to the S4HANA based on the details provided in selection excel file & update the user about the response of the fetch request & log record
	Automation	Create or Update Sales Contract	Automation that is responsible for trigger of the approval process & creation or update of provided sales contract in S4HANA
	Automation	Upload & Get Attachment details from DMS	Automation responsible for upload & retrieve of attachment in DMS to be provided in approval form
	Automation	Create Folder in DMS	Automation to create folder in Document Management Service for attachment upload
	Automation	Upload attachment to DMS	Automation to upload attachment in DMS in specific folder created in Document Management Service
	Automation	Update Log Record	Automation responsible for update of log record based on fetched request & trigger of notification process for email to the requester
	Automation	Move Processed File & Send Mail	Automation to move the processed file from 'ToBeProcessed' to 'Processed' folder. It also updates the log file & send mail
	Automation	Create Sales Contract	Automation to create sales contract in S4HANA
	Automation	Update Sales Contract	Automation to update sales contract header and/or item details
	Automation	Delete folder from DMS	Automation to delete the folder from document management service
	Automation	Send email after fetched Sales Contract(s)	Automation to notify requester with fetched data file & updated log record via email.
	Mail	Email: Sales Contract Created	Email to requester on successful creation of sales contract
	Mail	Email: Sales contract creation failed	Email to requester on failed sales contract creation
	Mail	Email: Missing Approver	Notifies admin about the missing approver details so that approval task can be assigned to the required approver.

	Mail	Email: About fetched data & log record	Notifies the requester about the completion of fetch request for Sales contract
	Mail	Email: Update Status	Email to requester about status on sales contract update request
	Decision	Determine Approver	Determines the approver details to whom the approval request needs to be delegated based on the Sales Contract details
	Decision	Determine Process Admin	Determines the admin email to notify admin to provide required approver email
	Action	Reads all sales contract headers:	Action to make GET call to S4HANA to get all sales contract header details
	Action	Reads all sales contract items	Action to make GET call to S4HANA to get all sales contract item details
	Action	Creates a sales contract	Action to make POST call to S4HANA to create sales contract
	Action	Updates the header of a specific sales contract	Action to make PATCH call to S4HANA to update sales contract header details
	Action	Updates a specific sales contract item:	Action to make PATCH call to S4HANA to update sales contract item details

Forms

This template includes following forms:

- **Approval Request for Sales Contract:** Provides the requested Sales Contract details along with input data file to the determined approver for their approval. Approver can review & provide approval along with comments.
- **Notification Form: Approval Rejection:** Provide required Sales Contract details along with approver's comment about the rejection reason.
- **Notification Form: Sales Contract Update Status:** Provide required Sales Contract Details along with status message from the update operation.

Note: User needs to review and submit the notification form in inbox to complete the execution from their end

Following is a snapshot from the Approval Request form as received by approver in their inbox:

SAP My Inbox

All Tasks (15)

Approval Request for Sales Contract

Search

REFRESH

Approval Request For Sales Contract
automation:b9c80d... Medium

Notification form for Update of sales contract
automation:1ebdd7... Medium

Notification form for Update of sales contract
automation:a83c8e... Medium

Approval Request For Sales Contract
automation:03744c... Medium

Approval Request For Sales Contract
automation:9442d1... Medium

Notification form for Update of sales contract
automation:53b2c8... Medium

Notification form for Update of sales contract
automation:b625b5... Medium

Approval form for sales Contract header & item details for creation or update in S/4HANA

Important Notes:
1) Please do not change any data in editable fields except for the respective approval checkboxes & approver comments.
Any other change in data is not supported.
2) Sales Contract header and items are considered as fully approved, only if the approval checkboxes for both sales contract header and all items are checked.
3) For Partial Approval, select only those checkboxes of items or header that are approved and click the 'Approve' button. Items and header with unchecked checkbox will be considered as rejected.
4) On clicking "Reject" button, the sales contract header and all items are considered as rejected. Any selected checkboxes will be ignored and the entire sales contract will be rejected.

Sales Contract
45000372

Sales Organization
1010

DistributionChannel
10

OrganizationDivision
00

SoldToParty
10100001

Header approval

☒ Sales Contract header approved ? ⓘ

Approver's Comment on Sales Contract header ⓘ
Header approved

Items approval

Sales Contract Item Details

Sales Contract Item Details (2/2)

SalesContractItem	Material	isApproved	Comment
10	RM019	☒	Item approved
11	RM019	☒	Item approved

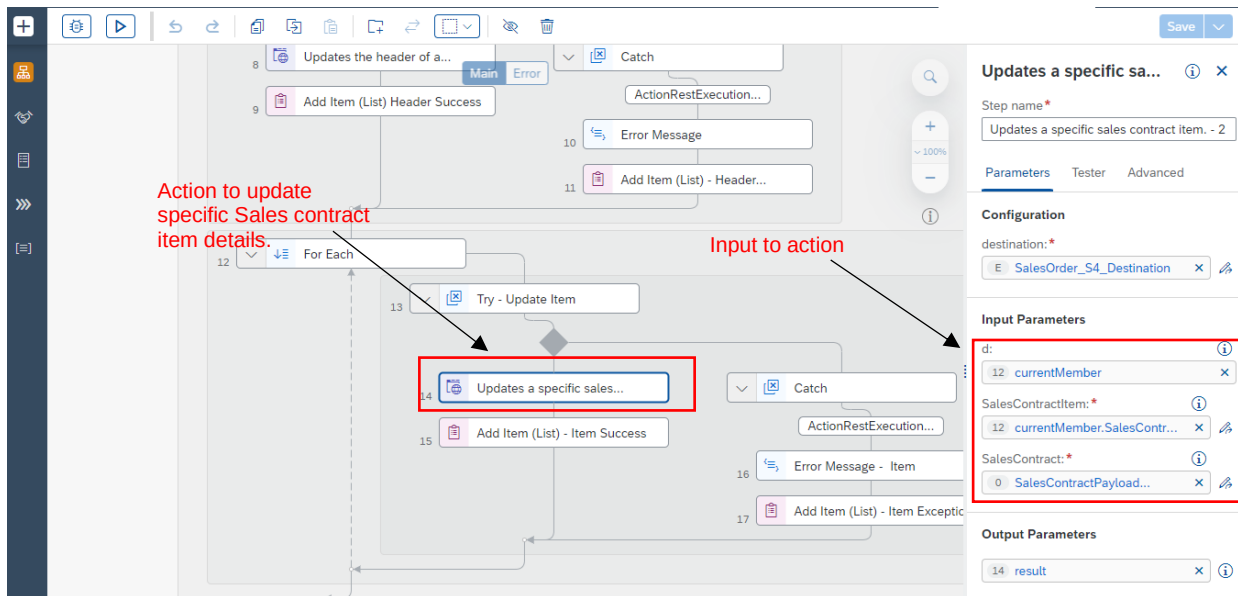
Approve Sales Contract Reject Sales Contract Show Log Claim

Actions

Following actions have been used the package to make API calls to S4HANA system:

- **Reads all sales contract headers:** This action is responsible for making a get request to S4HANA to fetch all sales contract details that matches the provided API filter value.
- **Reads all sales contract items:** This is responsible for fetching all the sales contract item details that matches the provided Sales contract number(s).
- **Creates a sales contract:** This is responsible for make a post request to S4HANA for the creation of new sales contract with the provided details.
- **Updates the header of a specific sales contract:** This is responsible for updating sales contract header values with the provided values if it already exists in the system or else it returns the required error details.
- **Updates a specific sales contract item:** This is responsible for updating matching sales contract item details in the S4HANA.

Following is the snapshot of one of the action payloads:



Decisions

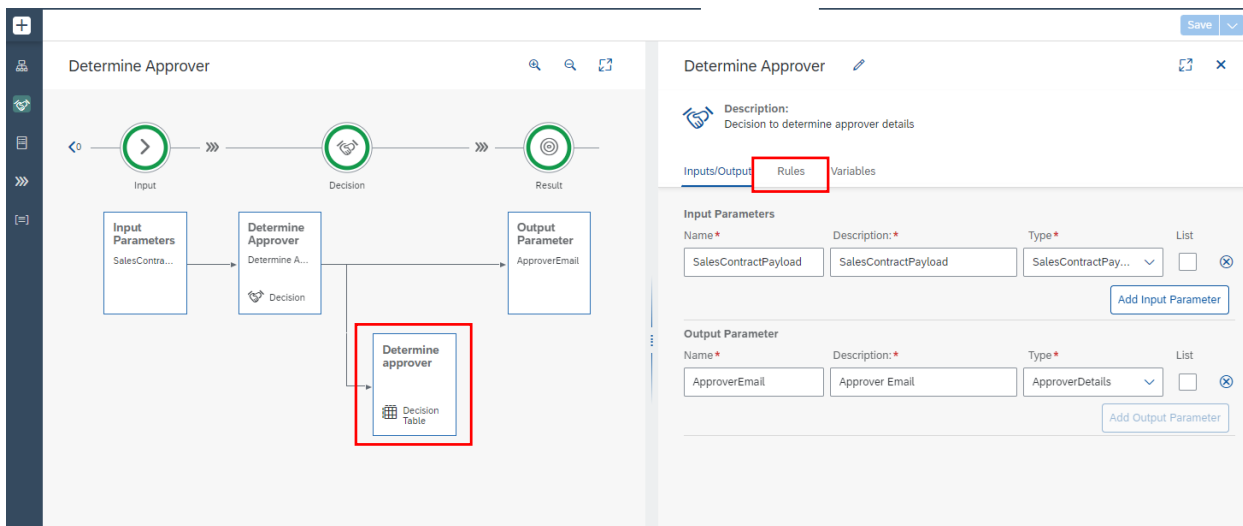
This package includes few decisions that can be updated based on the requirement. These decisions allow to encapsulate the business logic from core applications and supports the reuse of decision rules across different business processes. It enables customers to adopt changes in processes without changing the underlying process flows.

Determine Approver

This decision rule is used for determining the approver details such as approver email , approval required etc based on the Sales Contract details example SalesOrganization.

To check or update the input & output parameter of the decision, it can be accessed in the process & can be updated accordingly with the required data types.

Following snapshot shows the usage of SalesContract & ApproverDetails datatypes as input & output respectively:



Email Notifications

Email notification has been used in multiple points in the process flow that notifies the required recipient with the needed information:

- **Email: Sales Contract Created** - Notifies the requester & the approvers (if any) once the operation of creating Sales Contract is successfully completed. The notification will contain a customized message & Sales Contract number.
- **Email: Sales contract creation failed** - Notifies the requester if the Sales Contract creation is failed.
- **Email: Update Status** - Notifies the requester about the completion of update operation & required message to check the notification form in inbox for detailed update status.
- **Email: About fetched data & log record** - Notifies the requester about the completion of fetch request for Sales contract from S4HANA along with the specified file path having fetched data.
- **Email: Missing Approver** - Notifies admin about the missing approver details so that approval task can be assigned to the required approver.
-

Following is the snippet from “**Email: About fetched data & log record**”:

The screenshot displays the SAP Studio interface. On the left, a flowchart outlines an automation process: 1. Get Computer Name, 2. Open Outlook Instance, 3. Mail Body & Subject (highlighted with a red box), 4. Try (containing a decision diamond), 5. Send Email (Outlook), 6. Release Outlook Instance, 7. Close Outlook Instance, and finally an End node. On the right, a code editor shows the implementation of the 'Mail Body & Subject' step. The code defines variables for MailBody and MailSubject, constructs a detailed email body and subject line using system variables and file paths, and returns them as an array.

```

1 let MailBody = '';
2 let MailSubject = '';
3
4
5 MailSubject = "Sales Contract(s) details fetched from S4HANA";
6 MailBody = "Dear User, \n\n Sales Contract(s) details have been fetched from"+
7           "S4HANA & is available in the system: " + System +
8           "\n\n Fetched data file & update log file are available at following :
9           "\n\n- "+ DataFilePath+"\n\n- "+ LogFilePath +"\n\nRegards" ;
10
11
12 return [MailBody, MailSubject];

```

This email details can be customized based on the information that need to be shared with the requester as per your requirement.

Automations

This package includes several automation bots for performing different operations using available activities provided by SDK dependencies.

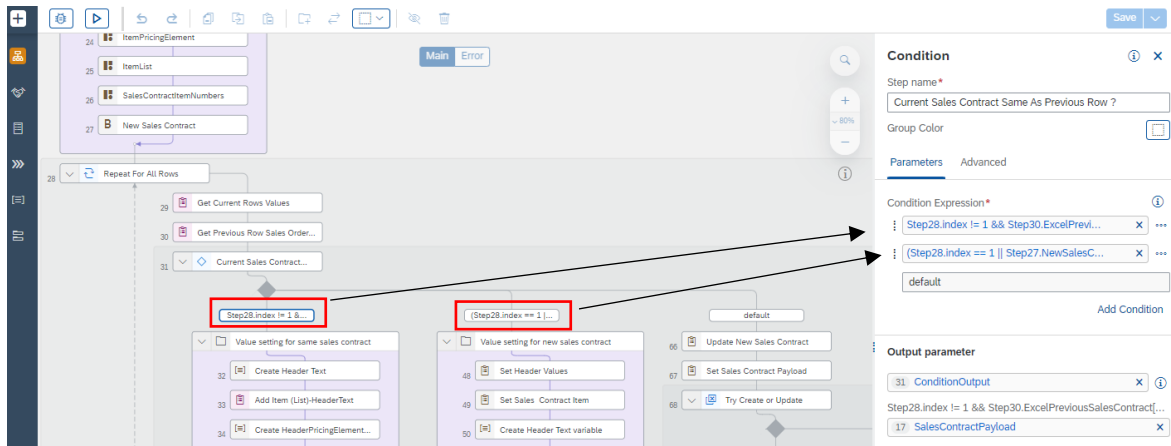
Following explains the functionalities about one of the automation(**Create or Update Sales Contract**) & its containing sub automations & process:

Create or Update Sales Contract

This automation is responsible preparing the required payload for create or update of sales contract. Based on provide operation details in input excel file ('C' for create and 'U' for update), required approval process is triggered. Followings are the brief execution flow of the automation:

- Step 1 to 15: Based on provided root folder path, it loops through individual files in the "ToBePorcessed" folder get the required values from current input file.
- Step 17 to 27: Automation does the initialization of datatypes to be used during the processing of input file & creation of sales contract payload.
- Step 28 to 30: Read the current & previous row data from the current input file.
- Step 48 to 65: Prepare the sales contract payload for the sales contract where the current row contains the new sales contract data or is the first data row of the input file.
- Step 32 to 46: Updates the sales contract payload with excel data where current row data matches with the previous sales row's sales contract.
- Step 66 to 80: Prepares the final sales contract header & item details with matching sales contract number & item number and triggers the required approval process based on the requested operation for create or update of sales contract.

Following is the snippet from the automation:



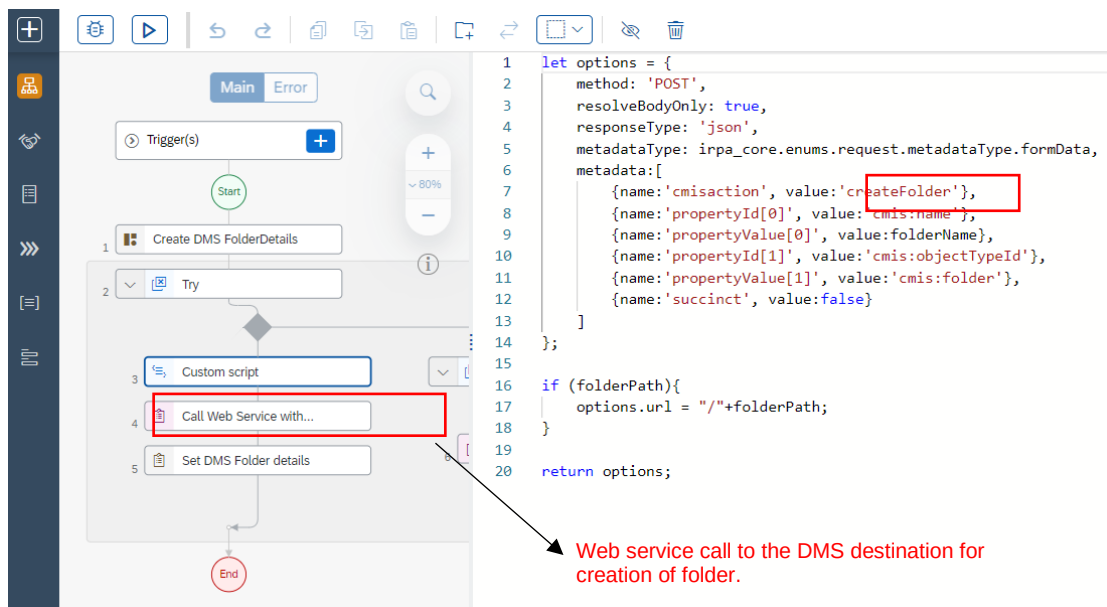
Approval Process for Sales Contract:

- This is the approval process that gets triggered with required sales contract details. Approval is determined based on decision rule & required header & item details can be approved or rejected with approver's comments.
- This process also contains sub automations following sub automations:

Upload & get attachment details from DMS:

- This automation contains sub automations responsible for getting input excel file from the local system, dynamically creating folder in DMS (Document management service) repository for individual approval request (Sub automation: **Create Folder in DMS**) and uploading the input data file to the created folder (Sub automation: **Upload attachment to DMS**) to be able to use in the approval request form as the attachment.

Following is the snippet from the **Create Folder in DMS** automation:



Following is the snippet from **Upload attachment to DMS** automation:

The screenshot shows an SAP Business Maker automation workflow. The workflow steps are: Trigger(s) → Start → Webservice Payload for... → Create uploaded file details → Try → **Call Web Service with...** (highlighted in red) → Log Message → Set Uploaded File Details → End. The custom script for the highlighted step is as follows:

```

1 let options = {
2   method: 'POST',
3   responseType: 'json',
4   resolveBodyOnly: true,
5   metadataType: irpa_core.enums.request.metadataType.formData,
6   metadata: [
7     {name: 'cmisaction', value: 'createDocument'},
8     {name: 'propertyId[0]', value: 'cmis:name'},
9     {name: 'propertyValue[0]', value: fileName},
10    {name: 'propertyId[1]', value: 'cmis:objectId'},
11    {name: 'propertyValue[1]', value: 'cmis:document'},
12    {name: 'media', file: filePath}
13  ]
14 };
15 if (folderName) {
16   options.url = '/' + folderName;
17 }
18 return options;
19

```

The 'Custom script' panel on the right shows the step name 'Webservice Payload for createDocument' and inputs for 'filePath' and 'fileName'.

Web service call to the DMS destination for creation/upload of document.

Delete folder from DMS:

- This automation does the clean-up operation by deleting the previous created folder from the DMS after completion of the approval activity.
- Following is the snippet from this automation:

The screenshot shows an SAP Business Maker automation workflow. The workflow steps are: Trigger(s) → Start → Try → **Custom script** (highlighted in red) → Call Web Service with... → Log Message → End. The custom script for the highlighted step is as follows:

```

1 let options = {
2   method: 'POST',
3   resolveBodyOnly: true,
4   responseType: 'json',
5   metadataType: irpa_core.enums.request.metadataType.formData,
6   form: {
7     cmisaction: 'deleteTree',
8     objectId: objectId,
9     allVersions: true
10  }
11 };
12 if (folderName) {
13   options.url = folderName;
14 }
15 return options;
16

```

The 'Custom script' panel on the right shows the step name 'Custom script' and inputs for 'folderName' and 'objectId'.

Get Sales Contract from S4HANA

Following is the snippet from this automation:

The screenshot shows the SAP Studio interface. On the left, a workflow diagram includes a step named 'Output Path Creation'. A red box highlights the script editor for this step, containing the following code:

```

1 var today = new Date();
2 var dd = String(today.getDate()).padStart(2, '0');
3 var mm = String(today.getMonth() + 1).padStart(2, '0'); //January is 0!
4 var yyyy = today.getFullYear();
5 today = yyyy+ mm +dd ;
6
7 let destLog = InputFolder+"\\FetchData\\SalesContract Log_"+today+".xlsx";
8 let destInputTemplate = InputFolder+"\\FetchData\\InputTemplate_"+today+".xlsx";
9 return {destLog,destInputTemplate};
10

```

On the right, the 'Custom script' configuration panel is shown. It has a 'Step name' field with the value 'Output Path Creation'. Under the 'Parameters' section, there is an 'Inputs' list with 'InputFolder' and 'Description'. The 'Output parameters' section shows 'outputPaths'.

This custom script is responsible for creating the output data file & log file with specific date time format & can be update as per the requirement.

Note that "FetchData" in the path follows the folder structure as shared in the prerequisite section & "InputFolder" is the root folder path used as input parameter for the execution of this automation.

Note:

Automations **"Create Sales Contract"** and **"Update Sales Contract"** takes approveditem as input parameter which contains the sales contract item details along with **"isApproved"** & **"ApproverComment"** properties for holding the approval information about individual item. Currently Sales contract item's **"SalesContractItem"** & **"Material"** is only added as the properties for this datatype as only these values are added in the approval request form. In case other item's values need to be added in the form, required properties need to be added the following datatype as well to handle those values in the automation.

The screenshot shows a data table with the following columns: Name, Type, Sample, List, and Required. The table contains the following rows:

Name	Type	Sample	List	Required
Item	Object		Yes	No
SalesContractItem	String		No	No
Material	String		No	No
isApproved	Boolean		No	No
ApproverComment	String		No	No

A red box highlights the 'SalesContractItem' and 'Material' rows. An arrow points from this box to the 'Field Details' panel on the right. The 'Field Details' panel shows the following information:

- General Information**
 - Name: Item
 - Type: Object
 - Sample value: Sample value
 - ☒ List

This template is provided with approval request form containing these item values.

The screenshot shows an approval form titled 'Approval Form - Sales Contract Item Details'. The form contains the following fields:

- Headline 1
- Headline 2
- Paragraph
- Text
- Text Area
- Dropdown
- Choice
- Checkbox
- Number
- Date

The 'Sales Contract Item Details' section contains the following fields:

- Sales Contract Item
- Material
- isApproved
- Comment

A red box highlights the 'Sales Contract Item' and 'Material' fields. An arrow points from this box to the text: **Sales Contract item properties in the approval request form**.

Process Conditions

The conditional branching in the process is done to route the process into different flows based on set of predefined conditions.

Below snapshot shows the conditional check for requested operation if its create or update based on the value from input excel file:

The top screenshot shows a process flow with a decision diamond labeled 'Create Or Update ?'. A red box highlights the diamond, and a red arrow points to it with the text 'Condition to check the operation type (Create or Update)'. The flow branches into 'Create' and 'Update' paths, each leading to an automation step. The right sidebar shows the 'Condition' configuration for 'Create Or Update ?'. The 'Step Name' is 'Create Or Update ?'. Under 'Branch Conditions', the 'Create' branch is selected, and the 'Open Condition Editor' button is highlighted with a red box. The 'Default' branch is also visible.

The bottom screenshot shows the 'Edit Branch Condition' dialog box. It contains a 'Satisfies' section with a list of conditions. The first condition is 'createOperation' (highlighted with a red box and labeled 'Property for conditional check'), followed by 'is' (highlighted with a red box and labeled 'Conditional expression'), and 'true' (highlighted with a red box and labeled 'Property value'). The 'Summary' section shows 'If value of createOperation is equal to true'. The 'Apply' button is highlighted with a red box.

Process Visibility Scenario

The visibility scenario is a dashboard which allows business users to track relevant process KPIs and statuses. A default dashboard is provided with this template, and it can be customized by selecting attributes from your process which you want to track in the process dashboard.

You can create visibility scenario artifact like any other artifacts in the process. After creating it click the processes tab & select the required process.

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Start Process

Trigger

SalesContract

Automation

Prepare Attachment

Start

Success

Attributes available on this process

Search

Approval Request for Sales Contract

Approvers Comment on Sales Contract header

Sales Contract header approved ?

list - Sales Contract Item Details

Comment

Material

SalesContractItem

isApproved

Prepare Attachment

filePath

filePath

Upload and Get Attachment details from D...

dmsItem

folderID

folderName

Save

⌵

Process Details

General

Inputs/Outputs

Visibility

Attributes

6 out of 15 available

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SoldToParty

DistributionChannel

SalesOrganization

SalesContract

SalesContractDate

PurchaseOrderByCustomer

OrganizationDivision

Dependencies

Technical Dependencies

The table below details the versions used to generate the mentioned Mass Maintenance of Sales Contract process.

Component	Version
Desktop Agent	3.17.55
SDK Core	1.40.31
SDK Excel	1.40.31
SDK Outlook	1.40.31
Action Project Dependency	Sales Contract (A2X)

Note: Automation will work with the version greater than above mentioned version

Support

There is no support available for the template content. If you experience general issues with SAP Build Process Automation, raise an incident via SAP Support Portal on **BPI-PA-BPC** component.

This template can be modified using SAP Process Automation. For example: add decision 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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