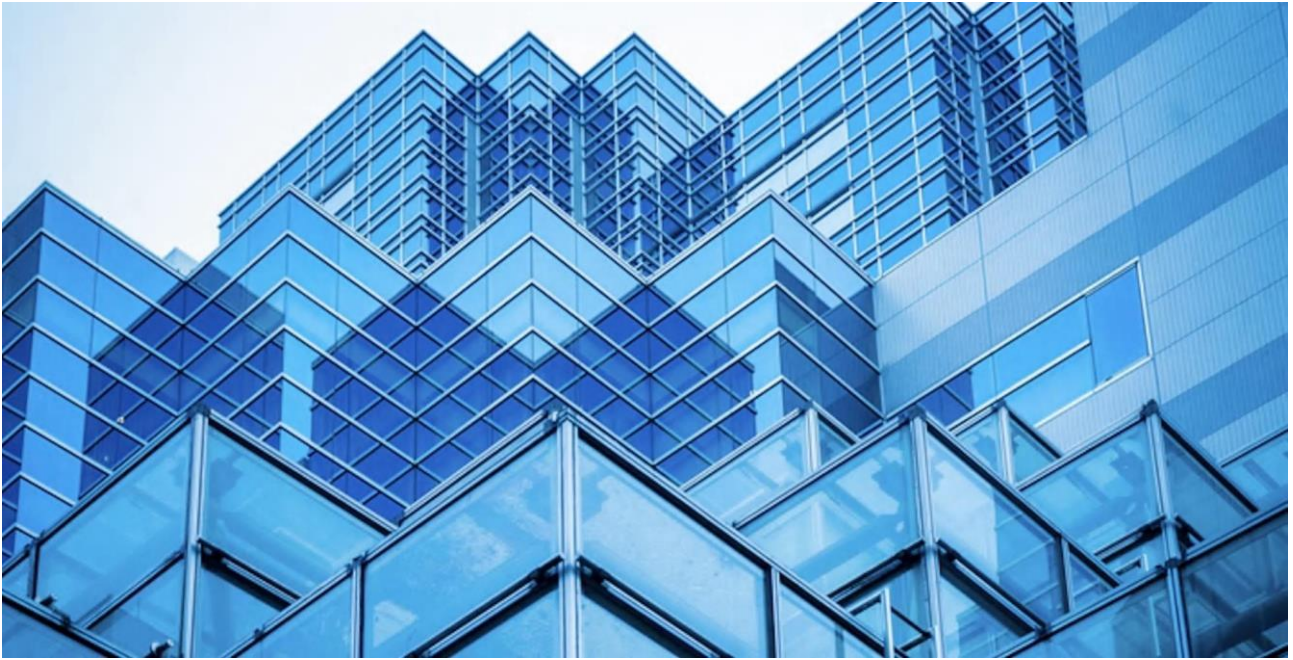




PUBLIC

SAP Build Process Automation **Extend Purchase Contracts**

Configuration & User Guide

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Change Logs

Version	Date	Description
1.0.0	January 12 th , 2024	Document created

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

1. Overview: In this section, you will get a quick overview of the use case, what are high-level components used and how the template works in a 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 (BTP) Account with destination.
 - (b) Import and configure the template using SAP Build Process Automation design studio.
3. User Guide: This section provides details about different artifacts that are used in this template like process definition, automations, forms, email notifications etc. to better understand how different capabilities are used in this template.

Note:

- This documentation is not a detailed guide to set up SAP Business Technology Platform services. It assumes that the IT admin who is setting the content is skilled with the SAP Business Technology Platform environment. The Configuration section must be mandatorily followed to import and configure the template.
- 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.

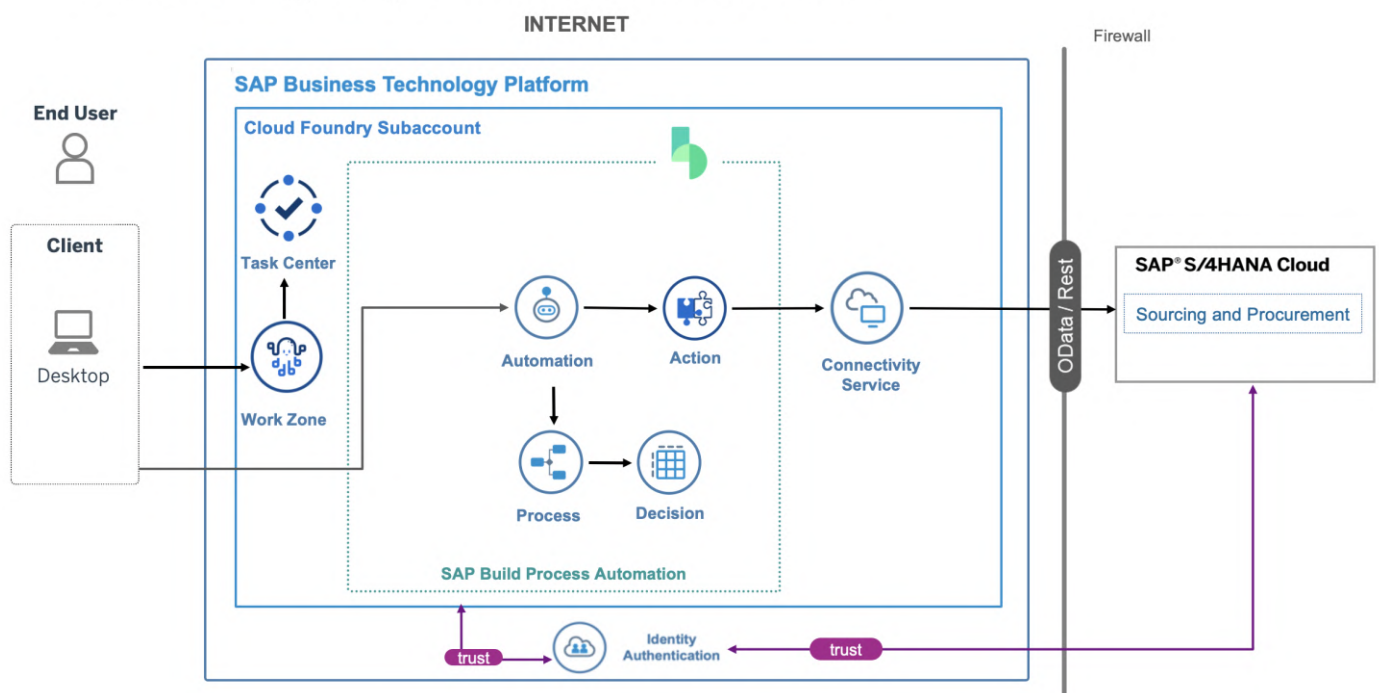
Overview

The "**Extend Purchase Contracts**" template streamlines and automates the process of extending the validity end date of the purchase contracts within the SAP S/4HANA system.

This process streamlines and expedites the contract extension process, reducing manual effort and improving efficiency.

Solution Diagram:

Solution Diagram | Extend Purchase Contracts



The following steps are included as a part of **Extend Purchase Contracts** template:

- The template uses below API calls:
 - **Purchase Contracts API**
 - **Get Method: /A_PurchaseContract**
This API is used to get the purchase contract details from the SAP S/4HANA system.
 - **PATCH Method: /A_PurchaseContract('{PurchaseContract}')**
This API is used to update the validity end date with the new validity end date in the SAP S/4HANA system.

More information can be found in [API_PURCHASECONTRACT_PROCESS_SRV_0002/overview](#)

- **Start Process:** “**Get All Purchase Contracts Details**” automation will be scheduled to run the process automatically in unattended mode, no actions required from the end user to start the process.
- **Read Operation:** Retrieves all purchase contract details whose validity end date is within the date range provided.
- **Approval Process:** Sends all fetched purchase contracts that eligible for an extension to an approval process where the approver can extend the contract end date.
- **Update Operation:** Updates the new purchase contract validity end date in the SAP S/4HANA system that was specified by the approver.
- **Email Notification:** Email notification is sent to the respective approver with purchase contract extension log report.

This structured process ensures that the process moves through an efficient and automated workflow. This reduces human errors, increases the data consistencies with overall efficiency and throughput of extend purchase contracts process.

Prerequisites

The following SAP Business Technology Platform services are required to consume the content package of Extend Purchase Contracts to the SAP S/4HANA system.

- SAP Build Process Automation to orchestrate the process.
- SAP Cloud Identity Services - Identity Authentication (Optional)
- SAP Connectivity service to establish access to SAP S/4HANA system, Public Edition
- SAP Work Zone, standard or advanced edition for accessing My Inbox.

Other Prerequisites

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

- SAP Desktop Agent 3.22.45 or higher
- Outlook application configured on the system where the automations will run to send notification mails to stakeholders.

Process Flow

1) Scheduled Automation Trigger

The “**Get All Purchase Contracts Details**” automation is scheduled to automatically run without human intervention.

2) Read All Purchase Contracts Details

“**Get All Purchase Contracts Details**” automation gets the relevant data from the SAP S/4HANA system to identify purchase contracts whose contracts validity end date are set to end in the next "x" days (e.g., 7 days) from the current date. This ensures timely identification of impending contract terminations.

3) Send Approval Form - Contract Validity End Date Extension

A contract extension request form “**Approval Form - Contract Validity End Date Extension**” is sent to the designated approver’s SAP build process automation inbox. The form contains details about the purchase contracts whose contract is set to end in the next "x" days (e.g., 7 days) from the current date and a space for the approver to input a new contract end date if they approve the extension.

4) Approver’s Decision

The approver receives the approval form and reviews it. They have the option to either “**Change Contract Validity End Date**” or “**Retain Contract Validity End Date**” based on the purchase contract’s situation and business needs.

a) Change Contract Validity End Date

- If “**Extend Validity End Date**” is selected, Enter the “**New Contract Validity End Date**” in the respective input field to update the contract end date in the SAP S/4HANA system.
- If “**Retain Contract Validity End Date**” is selected, there is no need to enter the date in the “**New Contract Validity End Date**” field.

b) Retain Contract Validity End Date

- The log report with total retained count along with purchase contracts details will be stored and sent to the respective approver.

5) Maintaining Logs

After the approver’s decision (whether “**Change Contract Validity End Date**” or “**Retain Contract Validity End Date**”), the logs for purchase contracts success, failure and retained along with purchase contract’s details are maintained in the excel sheet. The corresponding excel logs will be sent to the relevant approver accordingly.

Configuration Guide

Extend Purchase Contracts requires SAP Build Process Automation subscription.
Follow the [setup and configuration section](#).

Setup SAP Business Technology Platform Cockpit

Destination Configuration

Configure SAP S/4HANA Cloud, public edition Destination

To access the SAP 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.

Create a destination with Basic Authentication. Make sure the communication user has the appropriate communication strategy to edit product master data assigned to it in the SAP S/4HANA system.

Destination with Basic Authentication

Name	<S4HANA_Cloud_PurchaseContract>
Type	HTTP
Proxy Type	Internet
Authentication	Basic Authentication
URL	<S/4HANA_Cloud_API_PURCHASECONTRACT_PROCESS_SRV;v=0002/_endpoint> Example: https://<host>:<port>/sap/opu/odata/sap/API_PURCHASECONTRACT_PROCESS_SRV;v=0002/
Username	<username> of the SAP S/4HANA system Communication User
Password	<Password> of the SAP S/4HANA system 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

Setup Communication

To run this template, you must have a communication user, create communication arrangements between the communication user and the following communication scenario, and assign those communication arrangements to a communication system.

Steps to Create Communication System and Communication Arrangement are available in below documentation links:

[How to Create Communication Systems | SAP Help Portal](#)
[How to Create a Communication Arrangement | SAP Help Portal](#)
[Configuration and Role Details for accessing "Communication Systems" application.](#)
[Configuration and Role Details for accessing "Communication Arrangements" application.](#)

Communication scenarios to be configured.

Communication Scenario	Related API
Purchase Contract Integration (SAP_COM_0101)	Overview Purchase Contracts SAP Business Accelerator Hub

Configure SAP Build Process Automation Email Destination

Mail notifications are used in this template to send notifications to requestors at various stages of the process. Follow the instructions to set up mail destination in your SAP BTP Account. Configuring destination, see [Configure a SMTP Mail Destination](#). For more information refer to [Create HTTP Destinations](#)

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.

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 application.
- 2) Select the Project Type filter as **"Process Automation"**.
- 3) In the Search bar type **"Extend Purchase Contracts"**
- 4) Select the **"Create from Template"** button to add the template into your lobby.

After successfully adding the template, navigate back to the lobby to find the **"Extend Purchase Contracts"** project available for use.

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

Configure Agent Management Settings

This configuration is required to execute the Process with Automation. Kindly follow the steps explained [here](#).

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 Process

There is no configuration needed in the process. But it can be changed based on your requirements of the business.

Configure Forms

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

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

Approval Form - Contract Validity End Date Extension

Extension of Contract Validity End Date - Approval Request

Important Notes:

- 1) Approver should select one of the action under the "Approver's Action" column.
- 2) If "Extend Validity End Date" is selected, kindly enter the "New Contract Validity End Date" field in the respective input field and click "Change Contract end date" button, to update the contract end date in the S/4HANA system. If missed to enter date in "New Contract Validity End Date" field, process will not update the contract validity end date.
- 3) If "Retain Contract Validity End Date" is selected, no need to enter "New Contract Validity End Date" field. Even if the new contract validity end date is provided the process will not update the contract validity end date.

Below are the details of purchase contracts whose validity end date is set to expire

Purchase Contract Details

Purchase Contract	Purchase Contract Type	Company Code	Supplier	Purchasing Organization	Purchasing Group	Document Currency
Enter Text	Enter Text	Enter Text	Enter Text	Enter Text	Enter Text	Enter Text

+ Drag any field or click to add here

Change Contract Validity End Date Retain

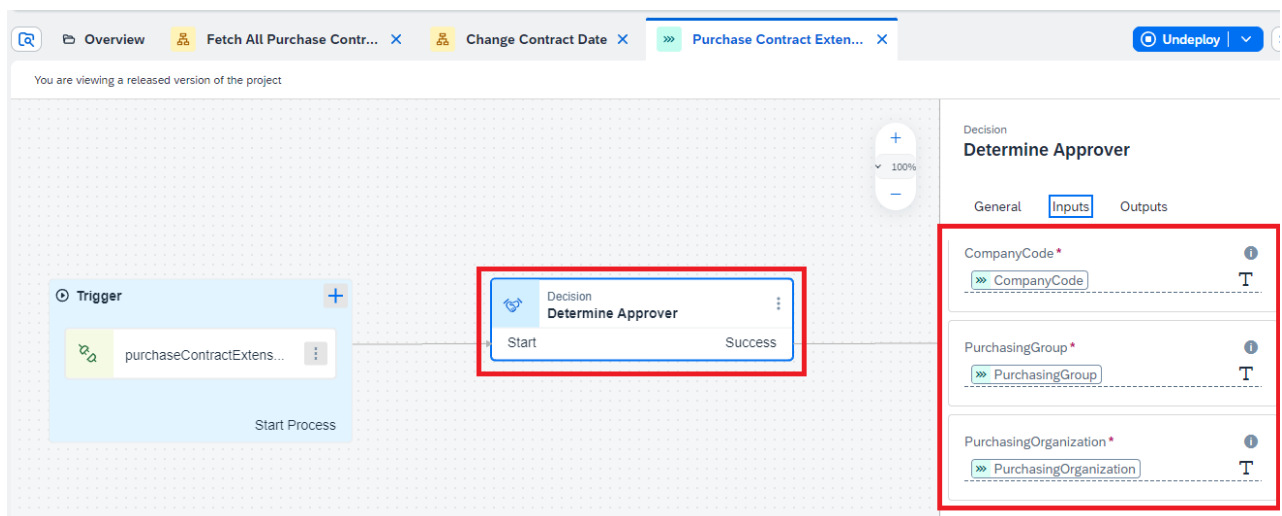
Configure Decision

Below are the decision artifacts in the process:

1. Determine Approver: To determine the approver email address to whom the approval task and notification mails are to be sent.
2. Determine Admin: To determine the admin email address to notify about the missing approver.

This decision must be modified for conditions and result values based on your business policies and requirements.

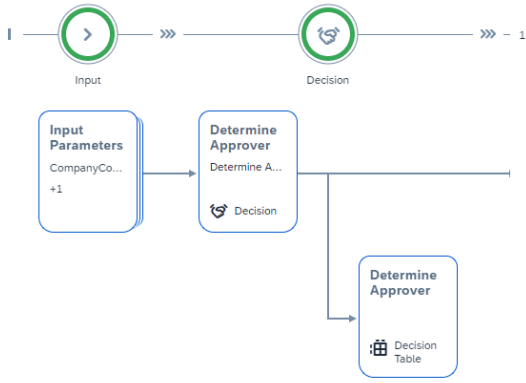
To modify the decision:



- o In the process editor, double click to open the decision.

You are viewing a released version of the project

Determine Approver



The diagram shows a process flow starting with an 'Input' node, followed by an 'Input Parameters' block (CompanyCo... +1), then a 'Determine Approver' decision block (Determine A...), and finally a 'Determine Approver' block (Decision Table).

Determine Approver

Description: Decision to determine approver based on Company code, Purchasing organization and Purchasing group

Inputs/Output

Input Parameters

Name *	Description: *	Type *	List
CompanyCode	CompanyCode	String	☐
PurchasingOrga...	PurchasingOrganization	String	☐
PurchasingGroup	PurchasingGroup	String	☐

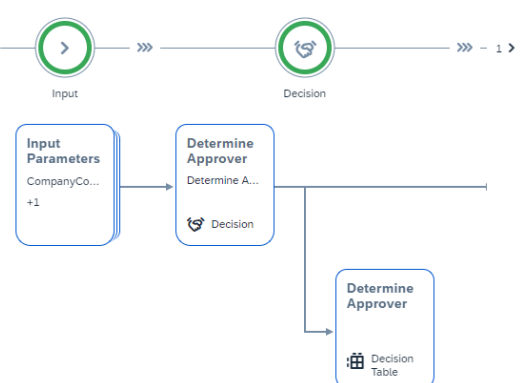
[Add Input Parameter](#)

Output Parameter

Name *	Description: *	Type *	List
Approver	Approver	String	☐

- o Select the rule from the decision diagram.

Determine Approver



The diagram shows a process flow starting with an 'Input' node, followed by an 'Input Parameters' block (CompanyCo... +1), then a 'Determine Approver' decision block (Determine A...), and finally a 'Determine Approver' block (Decision Table).

Determine Approver

Description: Decision to determine approver based on Company code, Purchasing organization and Purchasing group

Inputs/Output **Rules** **Variables**

Rules

☐ Name	Type	Execution Order
☐ Determine Appro...	Decision Table	1

- o Click on Determine Approvers and click on the pencil icon to edit.
- o The attributes used in the decision rule can be selected as per requirement.
- o Edit the rule to add more rows or update existing values.

Edit Rule

1 Rule Details — **2 Configure Conditions** — 3 Configure Results — 4 Review

Vocabulary

Search vocabulary or it...

Input / Output

- CompanyCode
- PurchasingOrganization
- PurchasingGroup
- Approver

Condition Details

☐ Condition Attributes

☐ CompanyCode

☐ PurchasingOrganization

☐ PurchasingGroup

In the decision table, you will see the conditions as columns (left to right) in the order configured here (top to bottom).

Previous Step Next Step Cancel

- o Add conditions to determine Approver and assign approver email address/group.
- o Click on Save.

Configure Email

To update the email body content, do the following:

- Select the mail artifact 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.
 - o You may also add someone in 'CC'
 - o Click on 'Open Mail Body Editor'.

General

Mail Header

To *

Subject *

> Additional Options

Mail Body

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.

Edit Mail Body

Process Inputs

>

list - GroupedData

GroupingField

CompanyCode

PurchasingGroup

PurchasingOrganizati...

LogFolderPath

Process Metadata

Process Started By

Process Instance Id

B

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Dear Admin,

The approval process is blocked for the below company code for Fixed Asset Acquisition Posting as the approver is not maintained. Please assign an appropriate user or group to the process instance for the approval process to continue from the monitoring application.

Company Code: » CompanyCode X

Process Instance Id: » Process Instance Id X

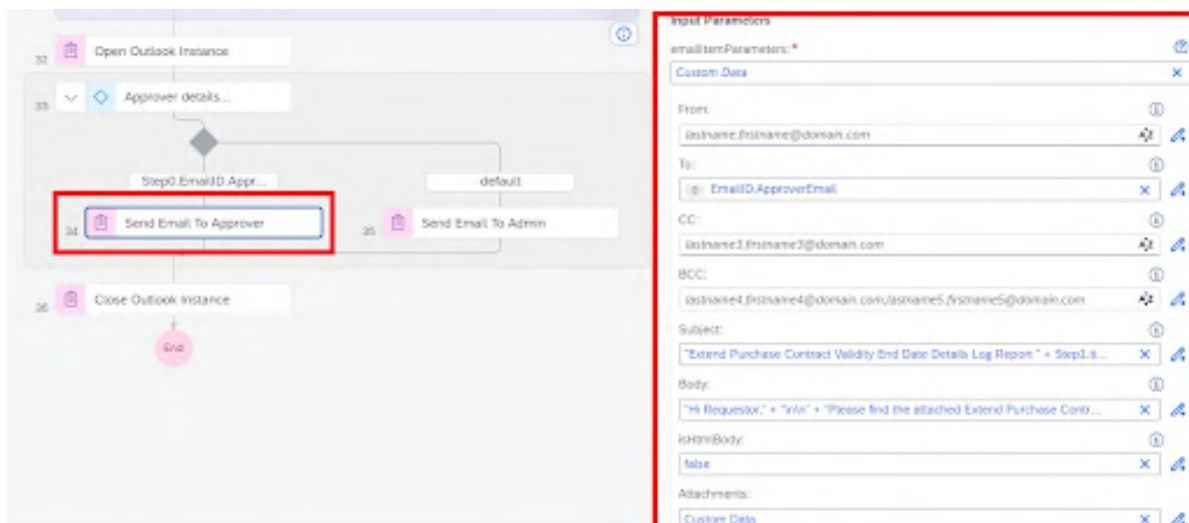
Please follow below steps to assign approver:

1. Open "SAP Build Process Automation"
2. Go to "Monitoring" tab
3. Open "Process and Workflow Instances" app
4. Search for above mentioned "Process Instance Id"
5. Click on the searched process instance
6. Click on "Additional Options" (denoted by three dots i.e. "...")
7. Click on "Show Tasks"

Apply

Cancel

There are email notification steps available in the automations as well. These are sent via Microsoft Outlook on the computer where the automations run.
The body and subject of the email can be modified accordingly as per your need.

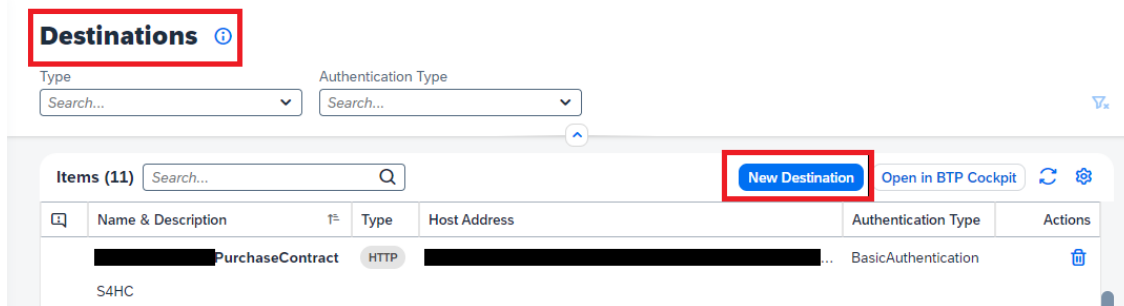


Configure Destination Settings

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

To configure destination:

- Click on **Control Tower**.
- Select **Destinations** from the right panel.
- Click **New Destination**
- Select the destinations to be added.



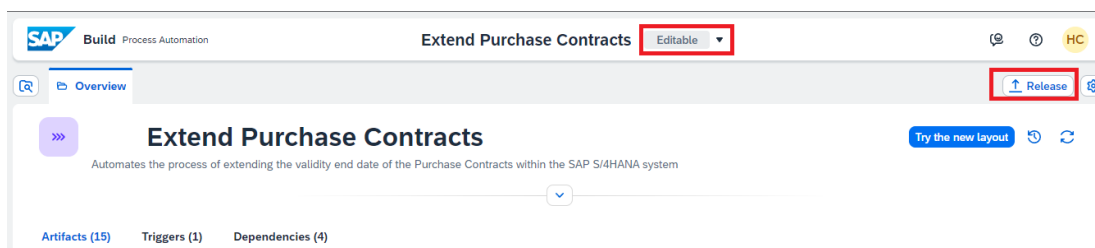
Release and Deploy Process

After configuring your process, it is time to publish, evaluate 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 cannot 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**':

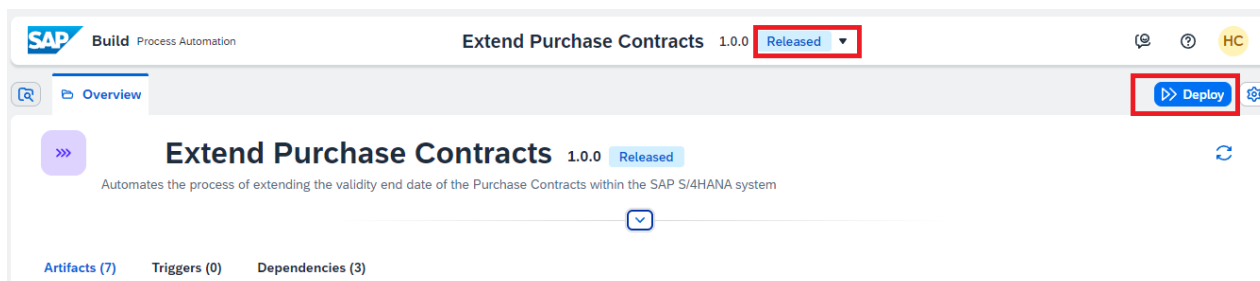


If this is the first time you have released the process, a version labeled 1.0.0 is released. For subsequent releases, you are prompted to select a version type before the process is released.

Deploy – This takes a released version of a process and enables it to be actively run and monitored. A deployed version of this process triggers automation, allowing to extend the purchase contracts validity end date and send out log reports to respective approvers.

To deploy a released version of your process,

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

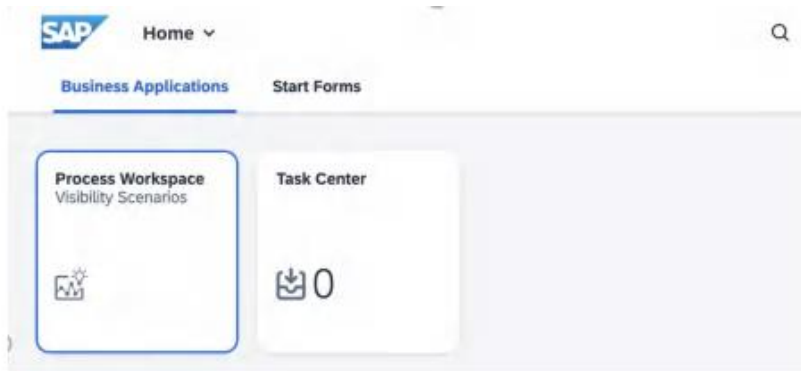


To deploy your project, you will be prompted to provide a destination and log folder path as an environment variable. Select the destination from the drop-down. Provide the path where logs need to be saved.

Note: If you do not map your destination environment variable with the actual SAP BTP destination during deployment, then the process will enter an Erroneous state when it tries to connect to the external system. For more details about the Destination artifact, please read our [documentation](#).

Configure SAP Work Zone

To configure SAP Work Zone standard edition - add Process Workspace and Task Center tile in SAP Work Zone to access the visibility dashboard. Follow the [tutorial](#) to configure Work Zone with visibility tiles.



User Guide

Capabilities

This template content contains the following key artifacts:
Please refer to [help documentation](#) about these different artifacts.

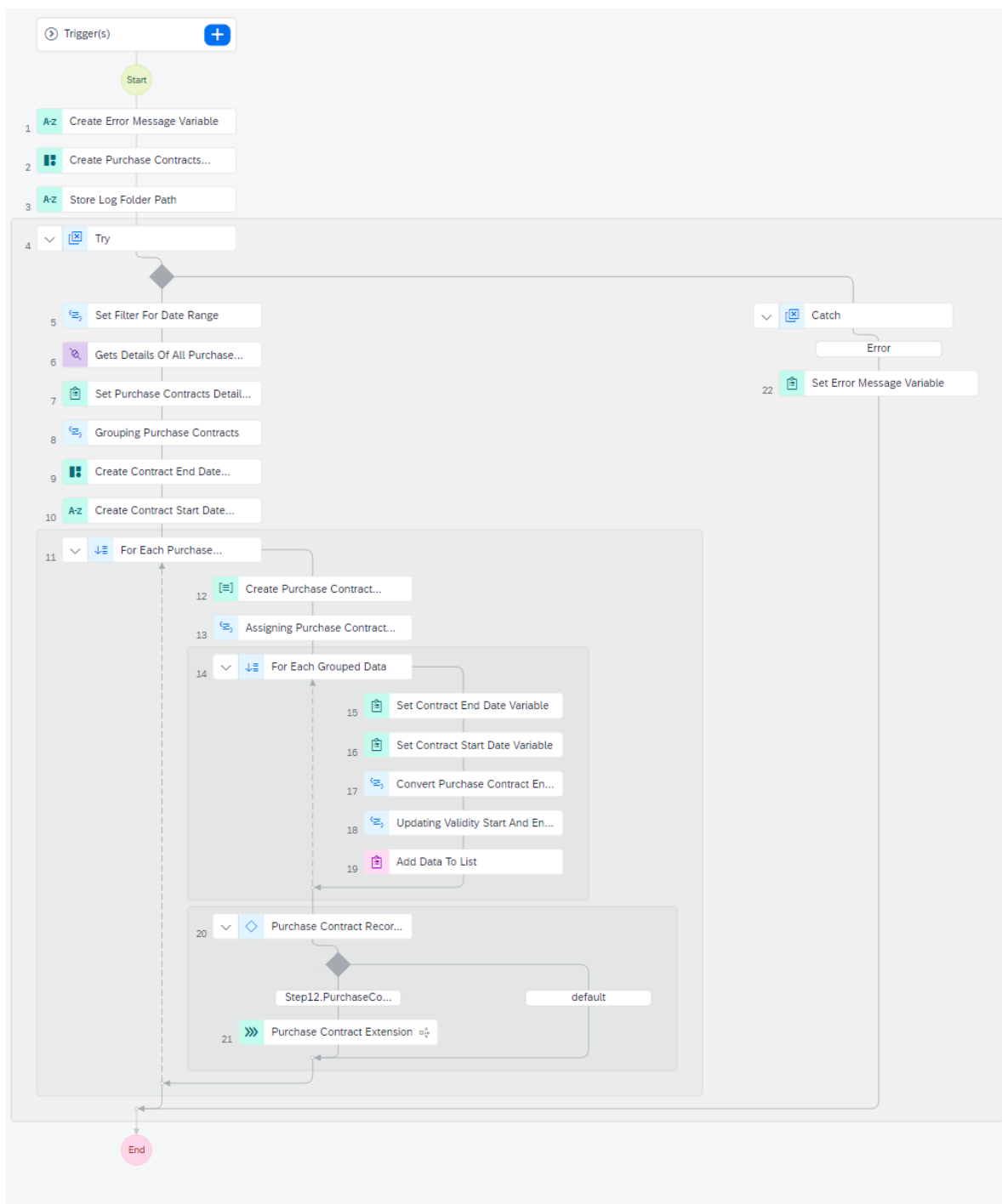
Icon	Type	Name	Description
	Process	Purchase Contract Extension	This process is to send approval form and act according to the manager's decision to extend the purchase contract's validity end date.
	Automation	Get All Purchase Contracts Details	Main automation to get the purchase contract details from the SAP S/4HANA system to identify purchase contracts whose contracts validity end date are set to end in the next "x" days (e.g., 7 days) from the current date.
	Automation	Change Purchase Contract Validity End Date	This automation is used to extend the purchase contract's validity end date based on the approval form details according to the manager's action.
	Automation	Generating Log File For Purchase Contracts	This automation is to generate log report with headers for extension of purchase contract validity end date
	Automation	Generate Log File For Retained Purchase Contracts Extension	This automation is to generate log report for retained purchase contracts, which will show how many records are retained and give the detailed information regarding each record
	Automation	Write Log Report	This automation is to write a log report of purchase contract details.
	Decision	Determine Approver	This decision is to determine the approver's email for extension of purchase contract's validity end date based on company code, purchasing organization, and purchasing group.
	Decision	Determine Admin	This decision to determine process administrator who will assign approvers when no approver is maintained in determining approver decision.
	Form	Approval Form - Contract Validity End Date Extension	This form serves as an approval request and is dispatched to the approvers. It includes purchase contract details. Additionally, it features a section where the approver can choose to "Extend Validity End Date" or "Retain Contract Validity End Date" the

			validity end date and provide the new contract validity end date.
	Data type	Purchase Contract	This data type is to store purchase contract data for extension of validity end date. It captures the entries from the SAP S/4HANA system.
	Data type	Purchase Contracts Grouping Fields	This data type is to store purchase contracts grouping fields to use it in process.
	Data type	Admin Details	This data type is to store administrator details.
	Data type	Approver Details	This data type is to store approvers details.
	Data type	Approved Contract Data	This data type is to store approved purchase contract data for extension of validity end date. It captures the entries from the approval form.
	Data type	Notifier Details	This data type is to store email ids of notifiers.
	Mail	Send Notification To Admin	A notification email is sent to the admin to assign approvers for the pending task when there are no approvers assigned.

Forms

Approval Form - Contract Validity End Date Extension

The approval request form seeks approval, providing the details about purchase contracts. The approver must take a decision based on the details provided in the form.



Step 1: Create variables for error message.

Step 2 to Step 3: Create data type variables of purchase contracts details and set folder path to store the logs.

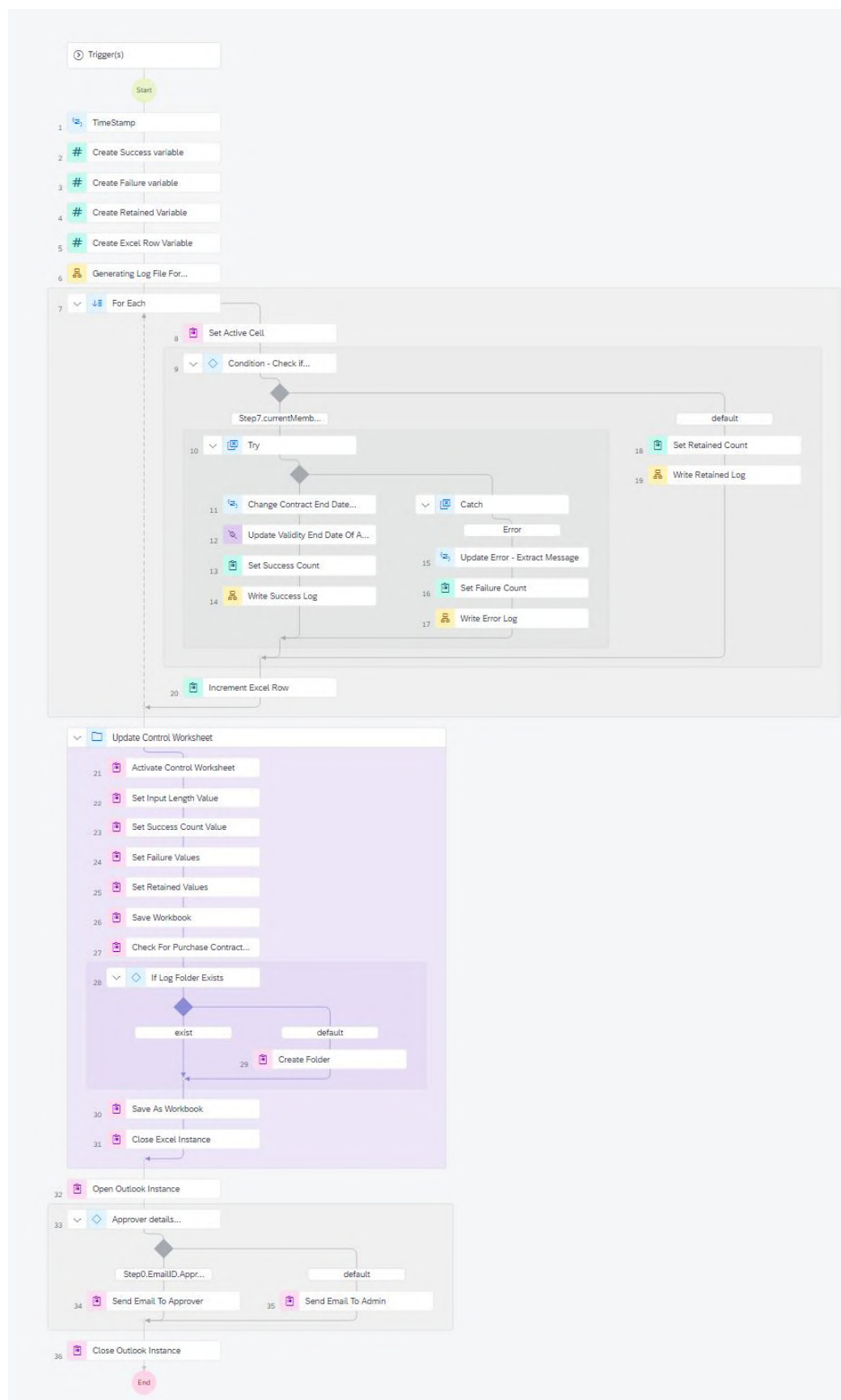
Step 4 to Step 10: Get all the details of the purchase contract from the SAP S/4HANA system whose contracts validity end date are set to end in the next "x" days (e.g., 7 days) from the current date and group the details based on company code, purchase organization and purchase group.

Step 11 to Step 21: For each grouped data trigger the purchase contract extension process with the values updated as required for the process execution.

Step 22: Error log will be set, if failed during the execution.

Change Purchase Contract Validity End Date

This sub automation is used to extend the purchase contract's validity end date based on the approval form details according to the approver's action.



Step 1: Create a timestamp to name the log file.

Step 2 to Step 5: Create variables to update success, failure, retained and error messages.

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Step 6: **“Generating Log File For Purchase Contracts”** automation is called to create the headers for the excel log file.

Step 8 to Step 12: For each approved purchase contract the contract validity end date is updated based on the approver's action by triggering **“Update Validity End Date Of A Purchase Contract”** automation.

Step 13 to Step 14: Updates the success logs in the log file by calling **“Write Log Report”** automation.

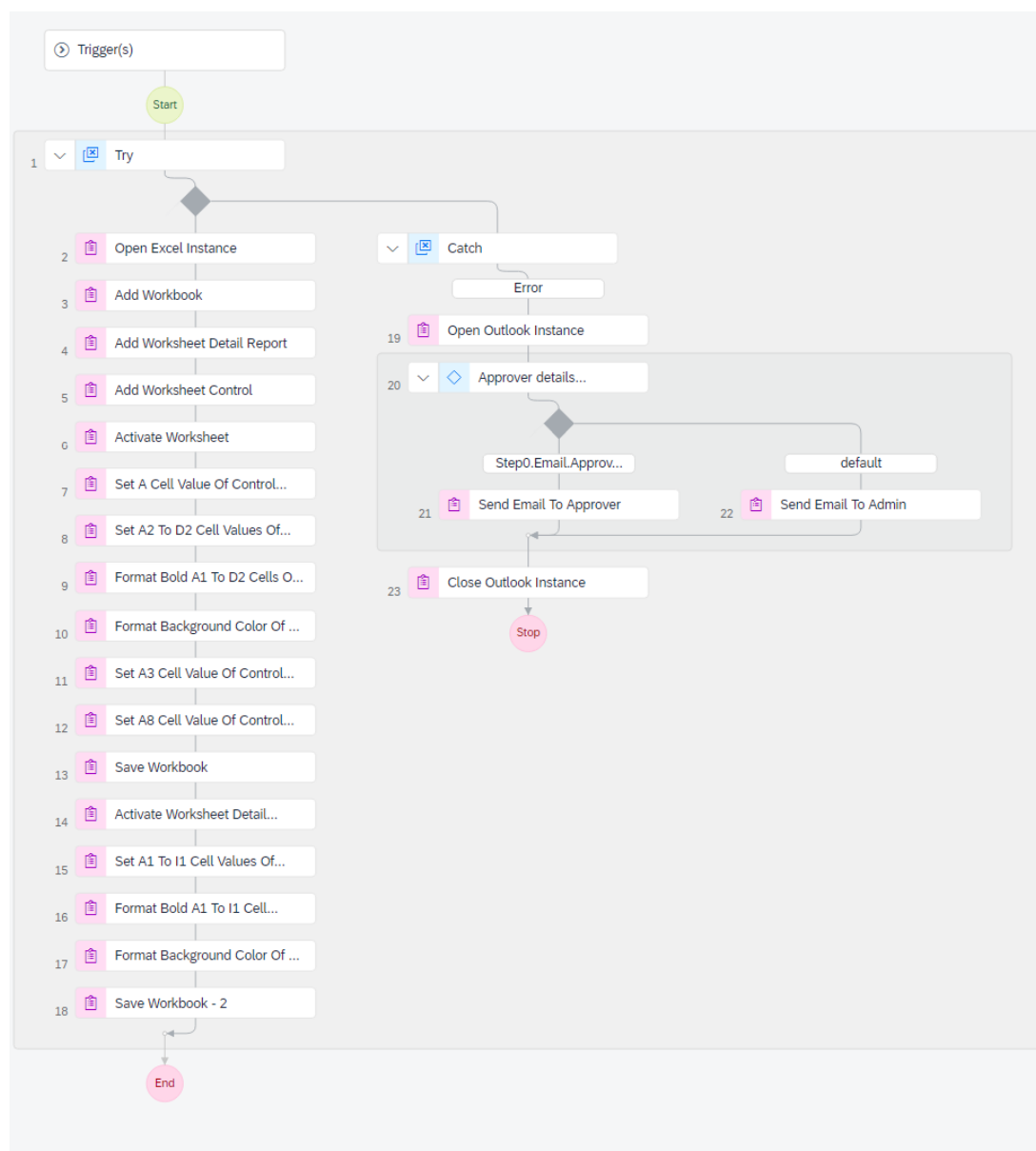
Step 15 to Step 17: If any error occurs the failure log will be updated by calling **“Write Log Report”**.

Step 18 to Step 19: Updates the retained logs in the log file by calling **“Write Log Report”** automation.

Step 21 to Step 36: Updates the total count in the log file and sends the attachment to the respective stakeholder.

Generating Log File For Purchase Contracts

This sub automation is to generate log report with headers for extension of purchase contract validity end date.



Step 1 to Step 5: Open an excel and add worksheets named “Detail Report” and “Control”.

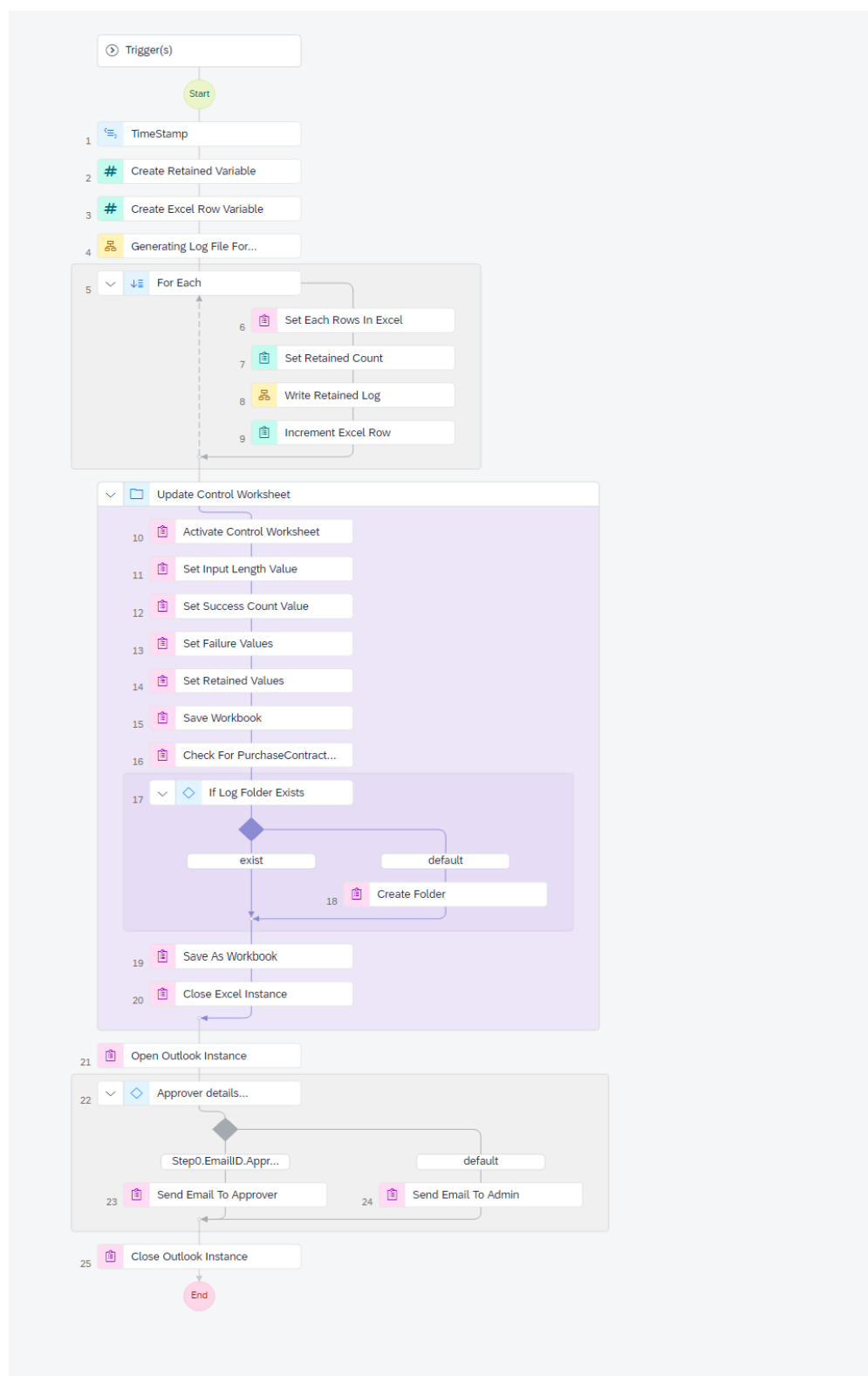
Step 5 to Step 13: Activate “Detail Report” worksheet add the required header details.

Step 14 to 18: Activate “Control” worksheet add the required header details and save the workbook.

Step 19 to 23: Send error mail to respective stakeholders with the error message.

Generate Log File For Retained Purchase Contracts Extension

This sub automation is to generate a log report for retained purchase contracts, which will show how many records are retained and give detailed information regarding each record.



Step 1: Create a timestamp to name the log file.

Step 2 to Step 3: Create variables to update retain count.

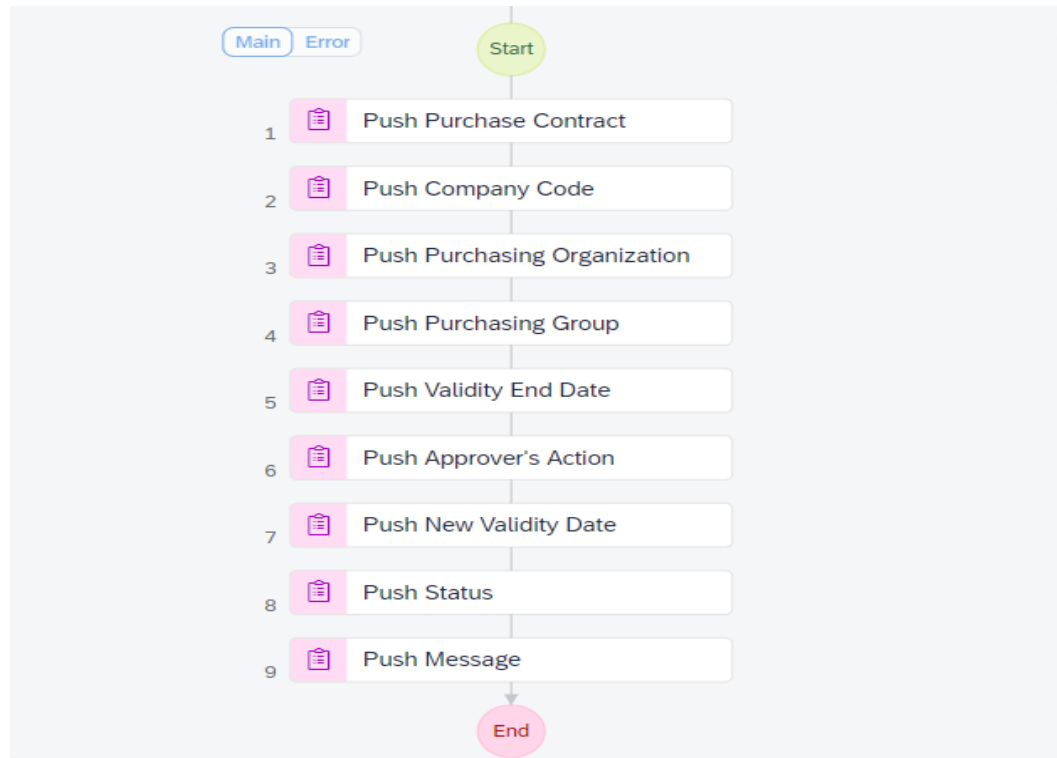
Step 4: **“Generating Log File For Purchase Contracts”** automation is called to create the headers for the excel log file.

Step 5 to Step 9: For each retained purchase contract details update the logs in the log file by calling “**Write Log Report**” automation.

Step 10 to Step 25: Updates the total count in the log file and sends the attachment to the respective stakeholder.

Write Log Report

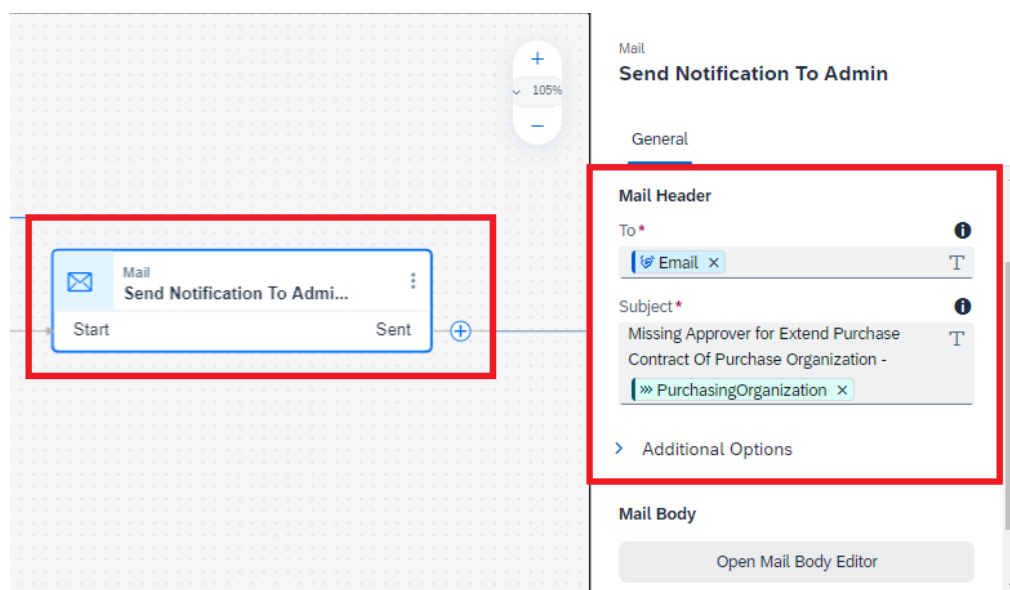
This sub automation is to write a log report of purchase contract details.



Step 1 to 9: Enter the details of the purchase contract data into the excel log file.

Email Notifications

Send Mail Notification To admin: Email notification is sent to the respective admin if no approver details are maintained for review and approval of the process.



Schedule an Automation to run in unattended mode

A scheduled trigger creates jobs that are based on the schedule you define in the trigger. These jobs run every day automatically. The following table provides steps to run the automation in scheduled mode.

Step	Instruction
Launch Desktop Agent	Launch Desktop Agent. Make sure that the Unattended mode is selected in the Projects tab of the Desktop Agent.
Open SAP Build Process Automation	Perform the following to release and deploy the task automation: • Navigate to the Store and search for the Extend Purchase Contracts package. • Click Add to add the package to the Lobby. • In the Lobby, click the project to open the Overview page. • Click Release and then click Deploy. For steps to release and deploy a project, see the Managing Existing Projects topic.
Add a Scheduled trigger	Add an unattended trigger to “Get All Purchase Contract Details” automation, under input parameter update “DateRange” which is mandatory field. To add an unattended trigger, refer to the Add a Scheduled Trigger topic.
Monitor the Job	Open SAP Build Process Automation and click Monitor > Automation Jobs. You should see your job on the list. If not, adjust the date range on the Jobs page and refresh the page. For more details, refer to the Automation Jobs topic.
Check for Report	After your job status is Complete, verify notification emails sent to the respective stakeholders.

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 a decision to determine the approver based on a certain business logic or add an action to post collected information to the backend SAP system. Refer [Help Portal](#) for more details.