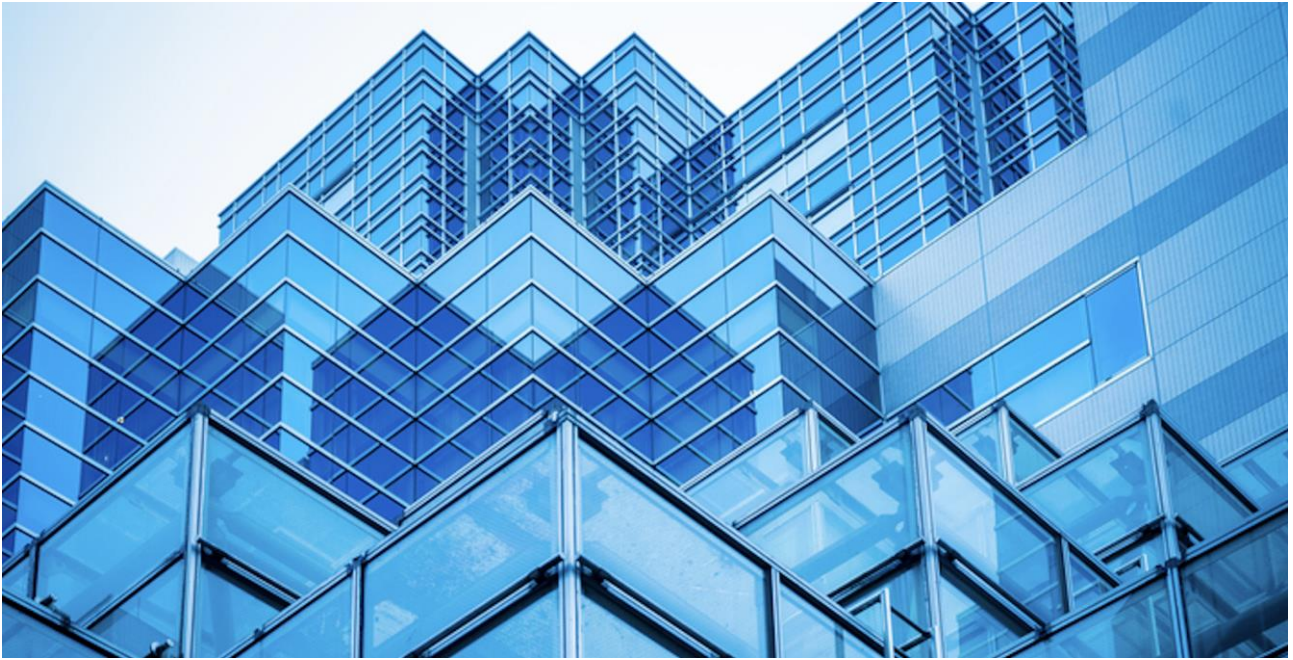




PUBLIC

SAP Build Process Automation

Retail Sales Price Update Configuration and User Guide

Contents

Overview	3
Required SAP Business Technology Platform Services	4
Prerequisites	5
Configuration Guide	5
Setup Business Technology Platform Cockpit	5
Configure SAP Build Process Automation Destination	5
Configure SAP S/4HANA Destination	5
Configure SAP Integration Suite Destination	6
Configure SAP Build Process Automation Email Destination	6
User Roles Configuration	6
Cloud Connector Configuration	7
Setup Content Package	7
Import SAP Build Process Automation content	7
Import and deploy TASK UI application	7
Configuration & Modification	8
Configure Decisions	8
Configure Email	11
Create Process	12
Create Forms	12
Create Automation	12
Create Decision	12
Create Process Visibility Scenario	12
Release and Deploy the Process	13
Configure and Deploy Start UI	14
Configure SAP Work Zone	15
User Guides	15
Capabilities	15
Actions	17
Appendix	17
Configure Custom Code & CDS Views	17
Support	18

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

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

Note:

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

Overview

This document provides technical information about what needs to be configured to make the package – Retail Sales Price Update run. The main audience of this document are technical personas like IT Administrators or Developers. The document tells what needs to be done to make the solution run. It mainly focusses on technical configuration like destinations for example.

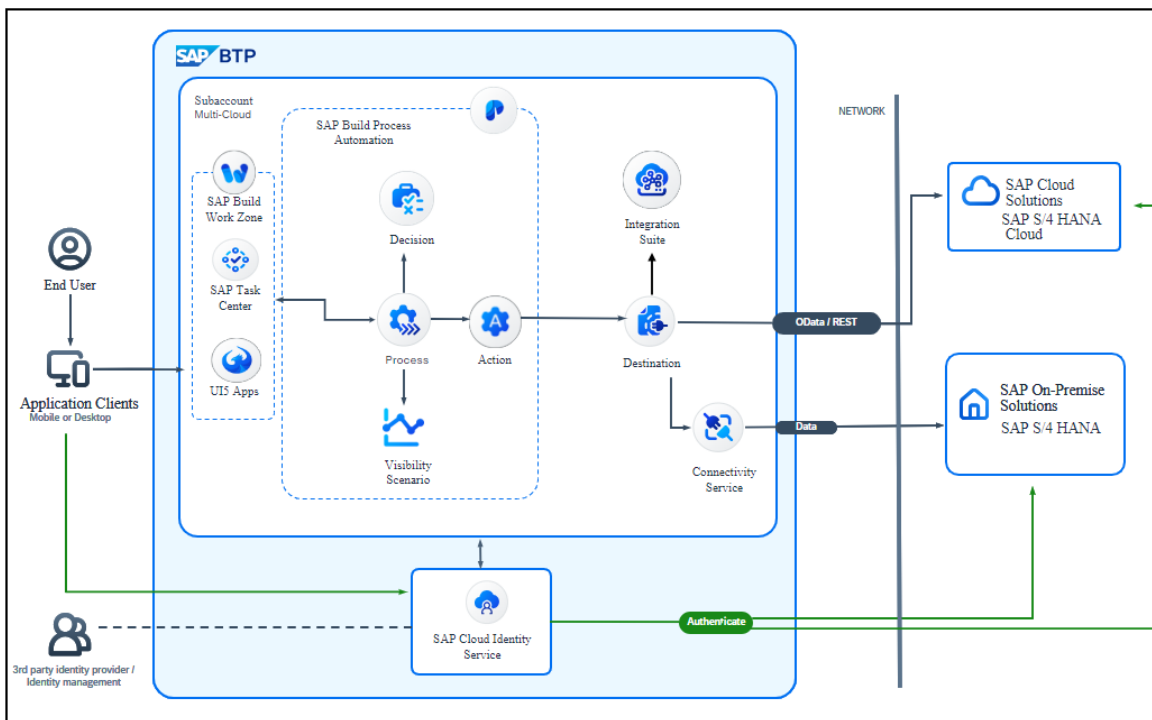
During retail & manufacturing business, there any instances of customer returns, quality rejects, missed shipment order resulting in accumulation of inventory across locations – retail stores, warehouse, distribution centers and manufacturing plants. Such stocks are important to be noticed by factory managers, warehouse managers & retail managers and work with supply chain team to work on next steps. Such stocks are important to be re- channelized by supply chain team to markdown for stock clearance, employee sales and hence monetize the inventory.

To handle this, supply chain planner analyses stocks situation across locations, decides to propose the price markdown for such products. It is then released for price approval from the merchandise manager. After this, the new price will be updated for the products and will be sold at store or through online to the customers

Features:

- Plug and Play with SAP S/4HANA without any additional development.
- Automatic email notification to parties involved.
- Decisions provides flexibility in determining approvers strategy and approvers.
- Out-of-the-box visibility into key process performance indicator.

Process Flow Diagram



Solution flow :

1. Requester enters the retail price details and starts the approval process from start UI.
2. Approvers can either approve or reject the proposed sales price data.
3. If all approvers approved, the retail price is updated in SAP S/4HANA system.
4. If the update fails due to functional error, then requestor is notified to rework on the data and start the process from beginning.
5. If the update fails due to technical error, then error handler will get task to either retry the posting or cancel the process.
6. Requester is notified of the successful update or receives a rejection/rework notice.

Note: The process can be triggered via Start UI. This package uses Start UI.

Required SAP Business Technology Platform Services

The following SAP Business Technology Platform services are required to consume the **Retail Sales Price Update**:

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

Prerequisites

For this template to run successfully the following prerequisites are needed

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

Configuration Guide

Retail Sales Price template requires SAP Build Process Automation subscription and Destination Setup for SAP Build Process Automation. Follow the [setup and configuration section](#).

Setup Business Technology Platform Cockpit

Configure SAP Build Process Automation Destination

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

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

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

Configure SAP S/4HANA Destination

This content package can be used with both SAP S/4HANA Cloud Private Edition (2023 onwards) and S/4HANA Cloud Public Edition (2502 onwards). Please create destinations accordingly.

Destination Property	Value
Name	<Name>
Type	HTTP
URL	<SAP S/4HANA endpoint>

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

Configure SAP Integration Suite Destination

Configure Destination to connect to Integration Suite destination cloud system.

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

Configure SAP Build Process Automation Email Destination

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

Configuring destination, [Configure Mail Destination](#)

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

User Roles Configuration

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

Role Collection Name	Purpose
TaskCenterAdmin	Permission to execute calls to the connector status API and monitor configured destinations and running background jobs.
Process Automation Developer	Standard Business User, can model and publish processes
ProcessAutomationParticipant	To execute (like accessing MyInbox, running the automations, etc.) this content package, you need to have this role assigned to the respective user.
ProcessAutomationAdmin	To perform process admin activities like accessing monitoring applications etc., you need to have this role assigned to the respective user.
Business_Application_Studio_Administrator	Allows administrators to manage (export and delete) user data.

Business_Application_Studio_Developer	Allows developers to load and develop applications using SAP Business Application Studio.
---------------------------------------	---

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

Cloud Connector Configuration

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

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

Resources	Protocol	Backend-Type
/sap/opu/odata/sap/ZZ1_MATERIAL_CDS/ZZ1_MATERIAL	OData	SAP S/4HANA
/sap/opu/odata/sap/ZZ1_SALESORG_CDS/ZZ1_SALESORG	OData	SAP S/4HANA
/sap/opu/odata/sap/ZZ1_DISTRICHANNEL_CDS/ZZ1_DISTRICHANNE L	OData	SAP S/4HANA
/sap/opu/odata/sap/ZZ1_PLANT_CDS/ZZ1_PLANT	OData	SAP S/4HANA
/sap/opu/odata/sap/ZZ1_PRICELIST_CDS/ZZ1_PRICELIST	OData	SAP S/4HANA
BAPI_RPC_CALCULATE_PRICES	BAPI/RFC	SAP S/4HANA
RFC_READ_TABLE	BAPI/RFC	SAP S/4HANA

Setup Content Package

Import SAP Build Process Automation content

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

This template can be downloaded from the Store:

1. Navigate to the Store in your SAP Build Process Automation account.
2. Select the Project Type filter as "Business Process."
3. In the Search bar type "**Retail Sales Price Update**"
4. Select the "Create from Template" button to add the template into your lobby.
5. After successfully adding the template, navigate back to the lobby to find the "**Retail Sales Price Update**" template available for use.

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

Import and deploy TASK UI application

The content package requires the SAP UI5 user interface which is available in Retail Sales Price Update Process content package. Below are details of Task UI Application:

Task UI Application: RetailSalesUI/retailapprove, retailrework

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

- Download the SAPUI5 application retailapprove, retailrework from the imported store project
- Open Business Application Studio and import the previously downloaded SAPUI5 project.
- Ensure that you have already created the SAP Build Process Automation instance and the same instance details need to be updated in the mta.yaml file available in the SAP UI5 application project.

```
modules:  
  - name: RetailSales-destination-content  
    type: com.sap.application.content  
    requires:  
      - name: RetailSales-destination-service  
        parameters:  
          content-target: true  
      - name: RetailSales_html_repo_host  
        parameters:  
          service-key:  
            name: RetailSales_html_repo_host-key  
      - name: uaa_RetailSales  
        parameters:  
          service-key:  
            name: uaa_RetailSales-key
```

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

Configuration & Modification

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

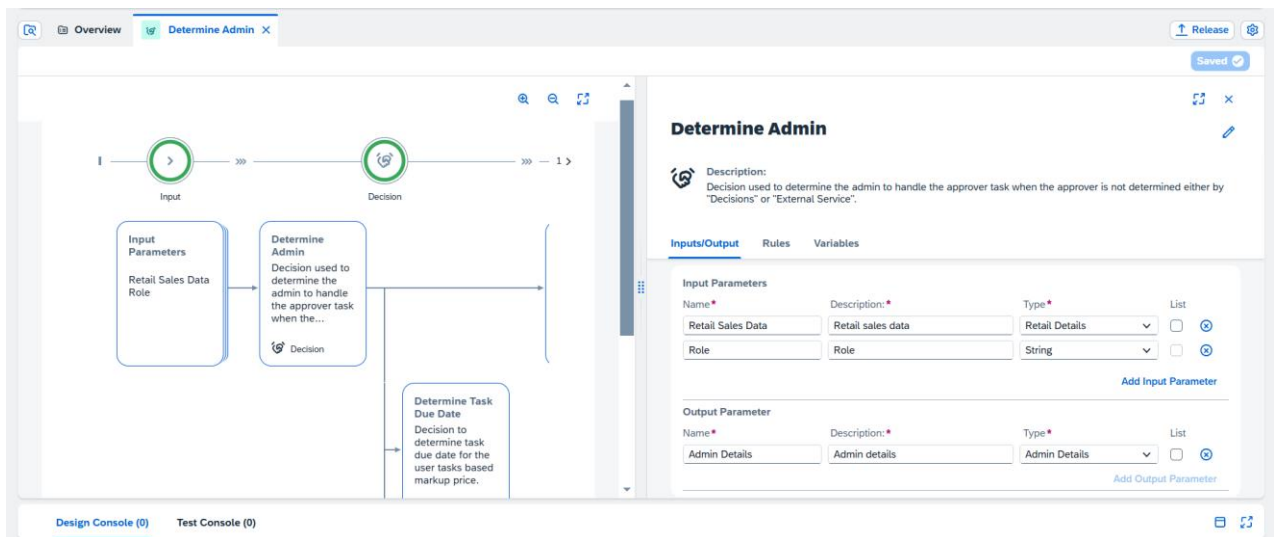
Configure Decisions

There are 5 decisions in this template. We can configure as required.

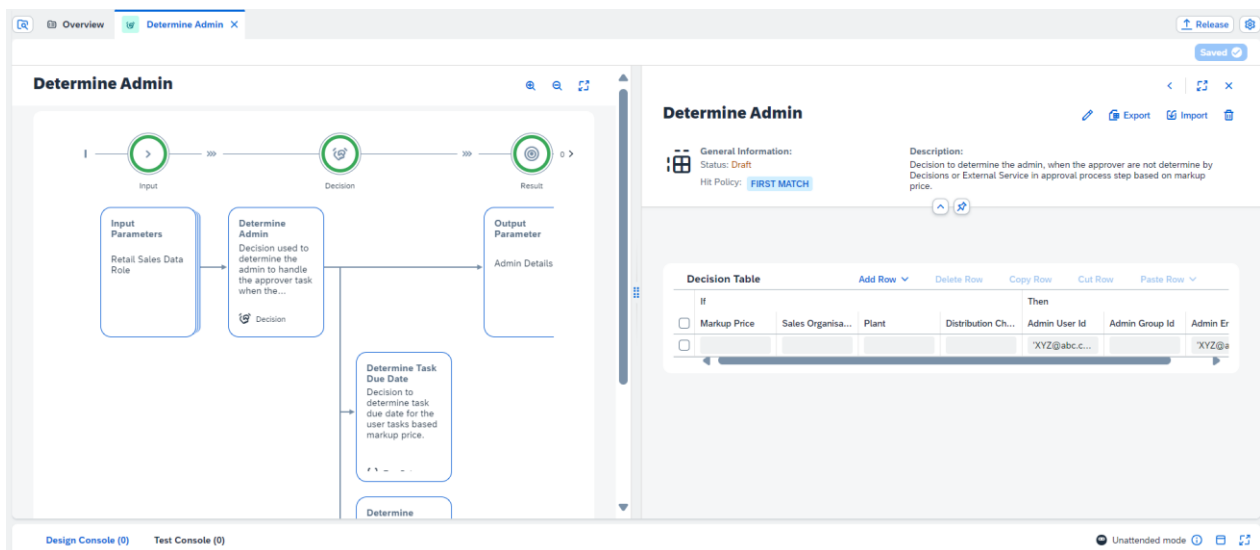
1. Determine Admin

Decision used to determine the admin to handle the approver task when the approver is not determined either by decisions or external service. To modify the decision:

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

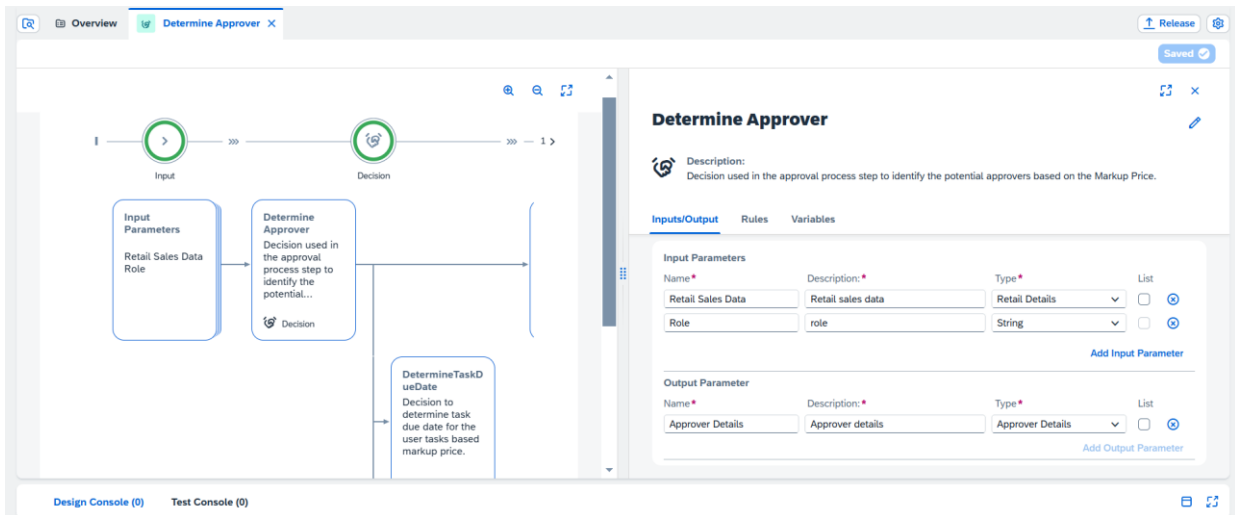


- Edit the rule to add more rows or update existing values.



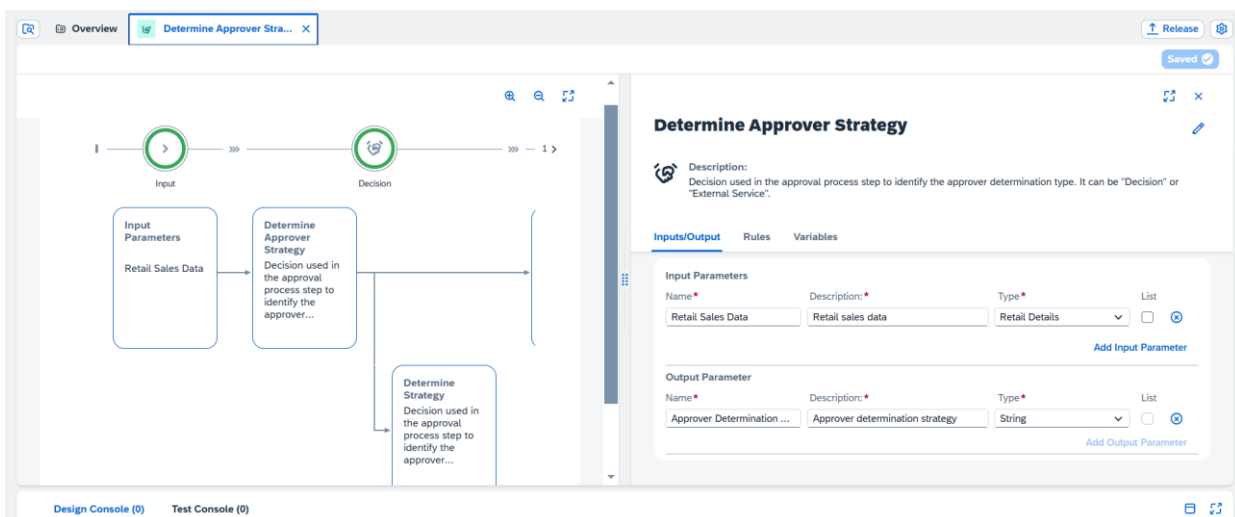
2. Determine Approver

Decision used in the approval process step to identify the potential approvers based on the markup price.



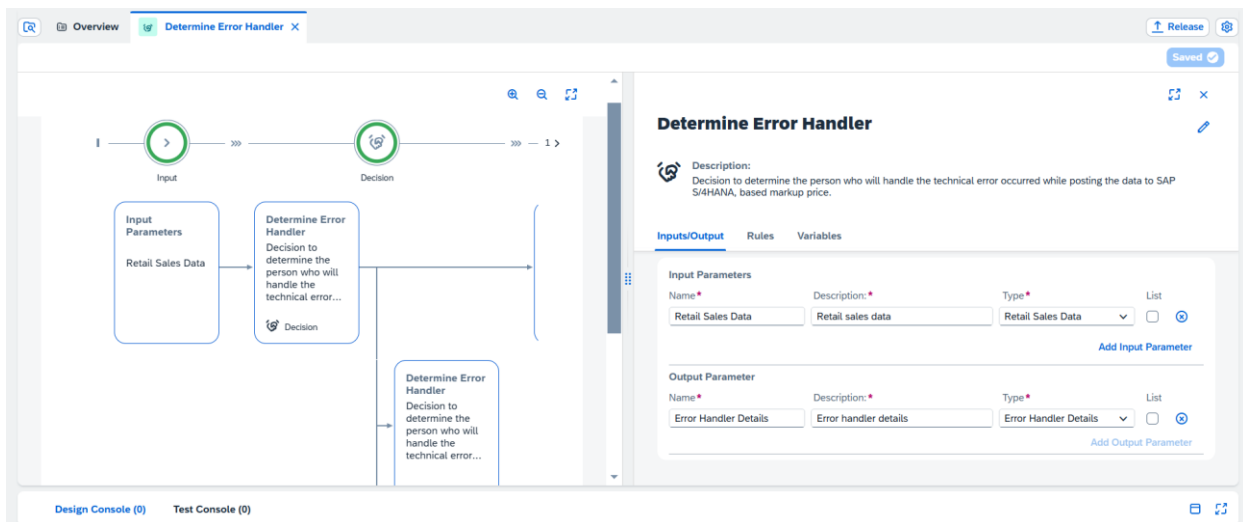
3. Determine Approver Strategy

Decision used in the approval process step to identify the approver determination type. It can be decision or external service.



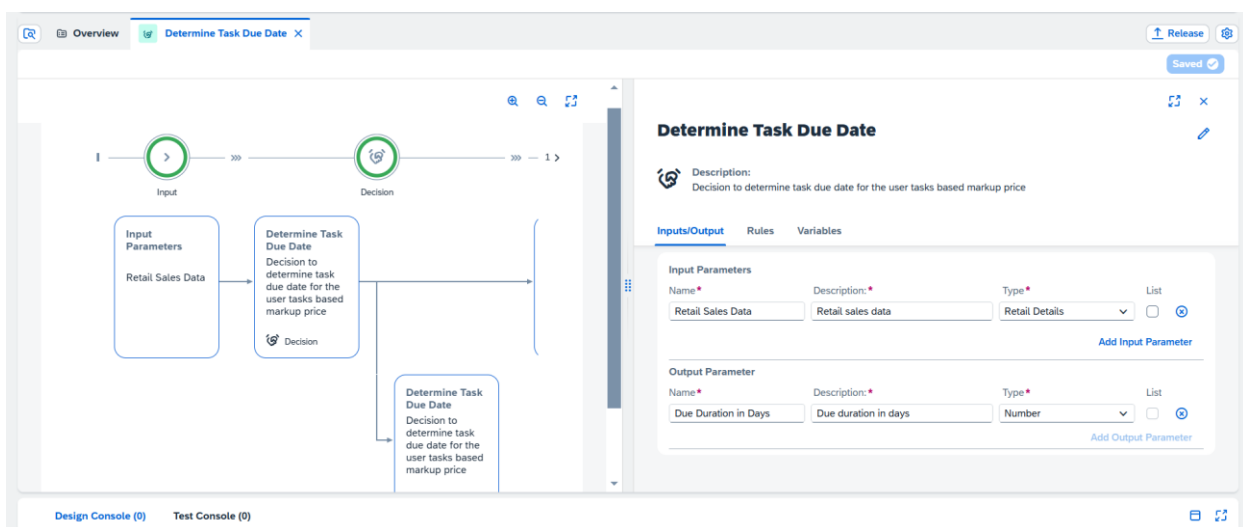
4. Determine Error Handler

Decision to determine the person who will handle the technical error occurred while posting the data to SAP S/4HANA, based markup price.



5. Determine Task Due Date

Decision to determine task due date for the user tasks-based markup price.



Configure Email

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

To update the email body content, do the following:

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

Mail Body

Dear >>> Role ,

There is an Retail Sales Price Update Request awaiting for your approval with immediate action. Please Approve it as soon as possible.

Retail Sales Price Details:

Material - >>> material

Sales Organisation - >>> salesOrganisation

Distribution Channel - >>> distributionChannel

Plant Group - >>> plantGroup

Plant - >>> plant

Price list - >>> pricelist

Validity From - >>> validityFrom

Validity To - >>> validityTo

Purchase Price Determination Sequence - >>> purchasePriceDeterminationSeq

Sales Price Determination Sequence - >>> salesPriceDeterminationSeq

Markup Price - >>> markupPrice

Gross Price - >>> grossPrice >>> currency

Final Price - >>> finalPrice >>> currency

Margin Gross Price - >>> marginGrossPrice >>> currency

Current Price - >>> currentPrice >>> currency

Basic Purchase Price - >>> basicPurchasePrice >>> currency

Unit of Measurement - >>> unitOfMeasurement

Close

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

For more information on email configuration and text, refer to this [link](#)

Create Process

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

Create Forms

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

Create Automation

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

Create Decision

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

Create Process Visibility Scenario

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

Release and Deploy the Process

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

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

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

To release a version of your process:

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

For more information please visit : <https://help.sap.com/docs/build-process-automation/sap-build-process-automation/releasing-project>

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

Import Destination

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

To configure destination,

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

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

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

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

To deploy a released version of your process,

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

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

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

- **Integration Suite:** Business Technology Platform destination to connect with cloud integration.
- **ProcessAutomation:** Destination to Process Automation tenant.
- **S4HANA:** Business Technology Platform destination to connect with SAP S/4HANA system. As shown in SAP S/4 Hana destination set-up-section.

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

Configure and Deploy Start UI

The content package requires the SAP UI5 user interface which is available in Retail Sales Price Update content package. Below are details of Start UI application

Start UI Application: RetailSalesUI / retailstartui

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

- Download the SAPUI5 application Start UI from the imported store project.
- Open Business Application Studio and import the previously downloaded SAPUI5 project.
- Ensure that you have already created the SAP Build Process Automation instance and the same instance details need to be updated in the mta.yaml file available in the SAP UI5 application project.

```
modules:
- name: RetailSales-destination-content
  type: com.sap.application.content
  requires:
    - name: RetailSales-destination-service
      parameters:
        content-target: true
    - name: RetailSales_html_repo_host
      parameters:
        service-key:
          name: RetailSales_html_repo_host-key
    - name: uaa_RetailSales
      parameters:
        service-key:
          name: uaa_RetailSales-key
```

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

```
var dataPayload =
{
  "definitionId": " ",
  "context": {
    "retailSalesData": {
      "markupPrice": MarkupPrice,
      "material": Material,
      "distributionChannel": DistriChan,
      "plant": Plant,
      "salesOrganisation": SalesOrg,
      "pricelist": PriceList,
    }
  }
}
```

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

Configure SAP Work Zone

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

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

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

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

User Guides

Capabilities

The following are the capabilities of this template:

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

Type	Name	Description
Decision	Determine Admin	Decision used to determine the admin to handle the approver task when the approver is not determined either by decisions or external service.
Decision	Determine Approver	Decision used in the approval process step to identify the potential approvers based on the markup price.
Decision	Determine Approver Strategy	Decision used in the approval process step to identify the approver determination type. It can be decision or external service.
Decision	Determine Error Handler	Decision to determine the person who will handle the technical error occurred while

		posting the data to SAP S/4HANA, based on markup price.
Decision	Determine Task Due Date	Decision to determine task due date for the user tasks-based markup price.
Process	Initialization	Process for initialization to check if the process is triggered due to functional error and process data rework from requestor.
Process	Approve Retail Sales Data	Process to approve the update in retail sales price. This step can be multiple times based on the number of approval levels needed.
Process	Retail Sales Price Update	Process to get approvals and post retail sales price data to S/4HANA system and rework data in case of any functional errors in posting.
Form	Admin Form	Admin form to assign approver manually when not determined by decisions.
Form	Error Details Form	Form for displaying error details in posting the retail sales price to the requestor.
Form	Retail Sales Approval Form	Approval form for retail sales price update approval where the end user can either approve or reject the task.
Form	Rework Form	Rework form to requestor for updating retail sales price details in case of any functional errors in posting and trigger the approval process from the beginning.
Data type	Admin Details	Data type for admin details like user id, email and due duration for the admin task.
Data type	Approver Details	Data type for approver details like user id, email and due duration of approval task.
Data type	Error Handler Details	Determine the error handler, who will deal with the technical errors occurring while posting the data to SAP S/4HANA.
Data type	History Details	Data type for history details like decision, comments and id of the approver or requestor.
Data type	Post Response	Data type for response of retail sales price data post to S/4HANA system
Data type	Retail Description	Data type for description details of retail sales price data
Data type	Retail Details	Data type for retail details like user id and mail id of the requestor
Data type	Retail Sales Data	Data type for retail sales data like material, plant, markup price, final price to be updated to S/4HANA system.
Data type	Status Details	Data type for details about various process status at different stages of the process.

Actions

Retail Sales Price Update Action

Action project for retail sales price update with connecting to integration suite system calling the bapi BAPI_RPC_CALCULATE_PRICES with approved price details.

Method	API	API Path	Purpose
POST	N/A	/http/WFRETAIL/RETAIL SALES	Post retail sales price details.

Retail Sales Price Update - Trigger Process Action

Action project for triggering a new process for retail sales price update.

Method	API	API Path	Purpose
POST	/public/workflow/rest	/public/workflow/rest /v1/workflow-instances	Starts a new workflow instance of the provided workflow definition.

Appendix

Configure Custom Code & CDS Views

- Open Custom CDS view app from fiori is used to create Custom CDS view services based on standard CDS views.
- Steps for creating Custom CDS view and expose as an API:
 - Click on Custom CDS app in Fiori Launchpad.
 - Refer the details for Material Field, select standard CDS view name - I_ProductText and click on Create button.
 - Enter the custom CDS view name like - ZZ1_MATERIAL_CDS and Select the specific fields Product, Language and Product name from standard CDS view and click on Save.
 - After SAVE click on publish button to create API- ZZ1_MATERIAL_CDS which is used to register OData service.
 - Repeat same steps for other CDS views.
- API service is registered in SAP S/4HANA using /IWFND/MAINT_SERVICE and used as OData service for F4 value.
- Register OData Services in SAP Gateway, Steps:
 - Go to t-code "/IWFND/MAINT_SERVICE".
 - Click on "Add Service".
 - Select the required System Alias.
 - Enter Technical Service Name as "ZZ1_MATERIAL_CDS" and click on "Get Services".
 - Select "ZZ1_MATERIAL_CDS" and click on "Add Selected Services".
 - Enter the required package and click on OK.
 - Repeat steps 1 to 6 for below Technical Services.

Repeat steps 1 to 6 for below Technical Service

Field Names for F4 Help	CDS view name	Technical Service Name	Fields Needs to Be Exposed (Alias)
Material	I_ProductText	ZZ1_MATERIAL_CDS	Product, Language,nProductName

Sales Org	I_SalesOrganizationText	ZZ1_SALESORG_CDS	SalesOrganization (Key), Language (Key), SalesOrganizationName
Distribution Channel	I_DistributionChannelText	ZZ1_DISTRICHANNEL_CDS	DistributionChannel(Key), Language (Key), DistributionChannelName
Plant	I_PLANT	ZZ1_PLANT_CDS	Plant (Key), PlantName, Language, ValuationArea, PlantCustomer
Price List	I_PriceListTypeText	ZZ1_PRICELIST_CDS	PriceListType (Key), Language (Key), PriceListTypeName

Support

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

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

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

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

www.sap.com