SAP BUSINESS TECHNOLOGY PLATFORM | EXTERNAL

Setup Guide

Retail Sales Price Update using SAP Workflow Management or SAP Build Process Automation

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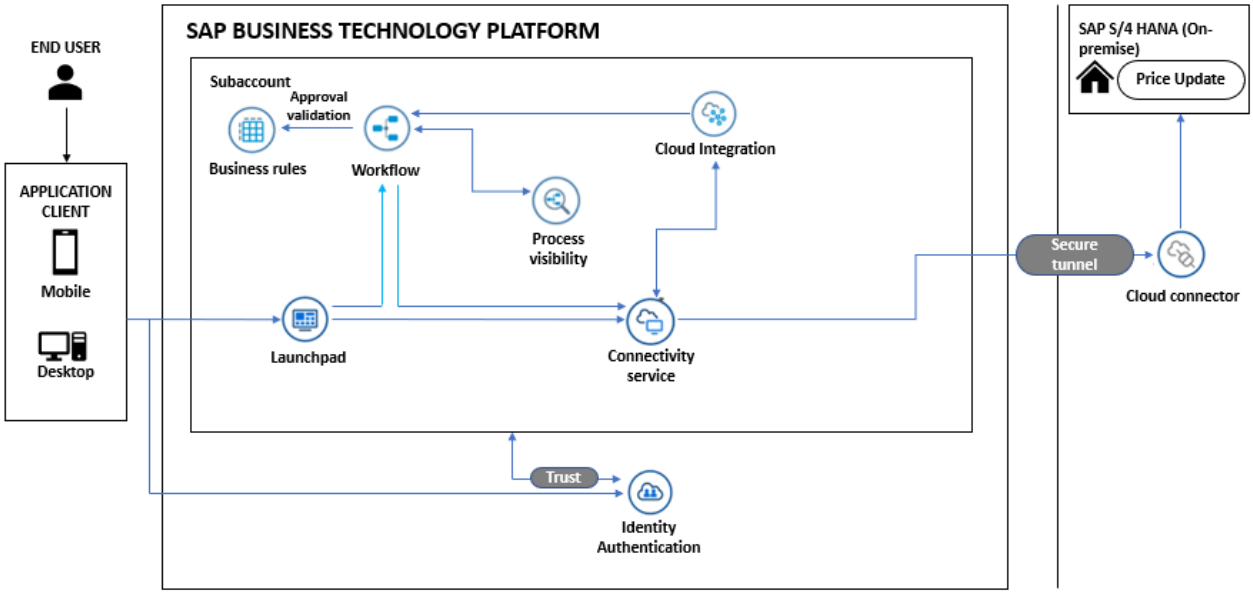
Overview

This document provides information about setting up the SAP Business Technology Platform account to consume the workflow content package Retail Sales Price Update. The main audience of this document are technical IT/system administrators.
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.
In order 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.

Salient features of this content package are:

- Plug and Play with SAP S/4HANA without any additional development
- Automatic email notification to parties involved
- Business Rules provides flexibility in determining approvers strategy and approvers.
- New variant of the process can be created using the pre-delivered process steps in a no-code/low-code approach.
- Out-of-the-box visibility into key process performance indicator



Required SAP BTP Services

The workflow content package Retail Sales Price Update is intended to be used for SAP S/4HANA (on-premise and cloud) and requires the following services in SAP BTP:

- SAP Build Process Automation or SAP Workflow Management to orchestrate the process.
- SAP Connectivity service (cloud connector) to establish access to SAP S/4HANA on-premise.
- SAP Cloud Portal service or SAP Launchpad service to access the apps that are involved in the process.
- SAP Cloud Identity Services - Identity Authentication (optional).
- SAP Business Application Studio to modify/deploy the SAPUI5 applications (optional).
- SAP BTP, Cloud Foundry runtime.

Setup and Configuration

This section will explain how to setup the integration content that is required for the workflow content packages Retail Sales Price Update

The Retail Sales Price Update content package requires SAP Build Process Automation or SAP Workflow Management subscription or a CPEA contract. Based on which service you plan to use, follow the appropriate section to configure either SAP Build Process Automation or SAP Workflow Management.

Configure for SAP Build Process Automation

Follow the setup and configuration section of SAP Build Process Automation:

1. Subscribe to SAP Build Process Automation (Standard Plan)
2. Configure Destinations for Live Process Projects
    a. Import Package Destination
3. [Optional] Configure SAP Launchpad Service for SAP Build Process Automation

Configure Process Automation Destination

A HTTP destination is required in the BTP subaccount where SAP Build Process Automation is subscribed. Create a destination with name "sap_process_automation_service" with the following configuration if it doesn't exist already. Please refer how to create a HTTP destination OAuth 2.0 Authentication (client credentials).

Name	sap_process_automation_service
Type	HTTP
Proxy Type	Internet
Authentication	OAuth2ClientCredentias
URL	<"endpoints"."api">
Client ID	<"uaa":"clientis">
Client Secret	<"uaa":"clientsecret">
Token Service URL	<"uaa":"url">/oauth/token

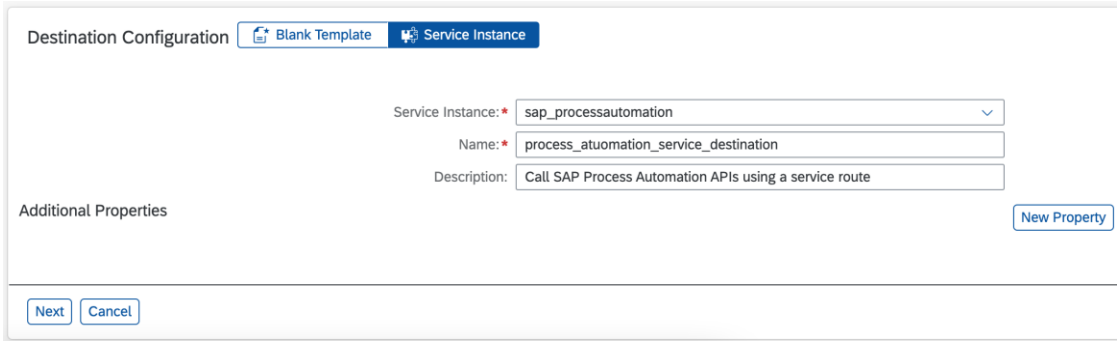
Note: While creating the service instance for SAP Build Process Automation service, make sure that at least the required scopes are assigned (help documentation to enable technical authentication to access the SAP Build Process Automation APIs). If the scopes are not assigned, you can also update the service instance with the required scopes.

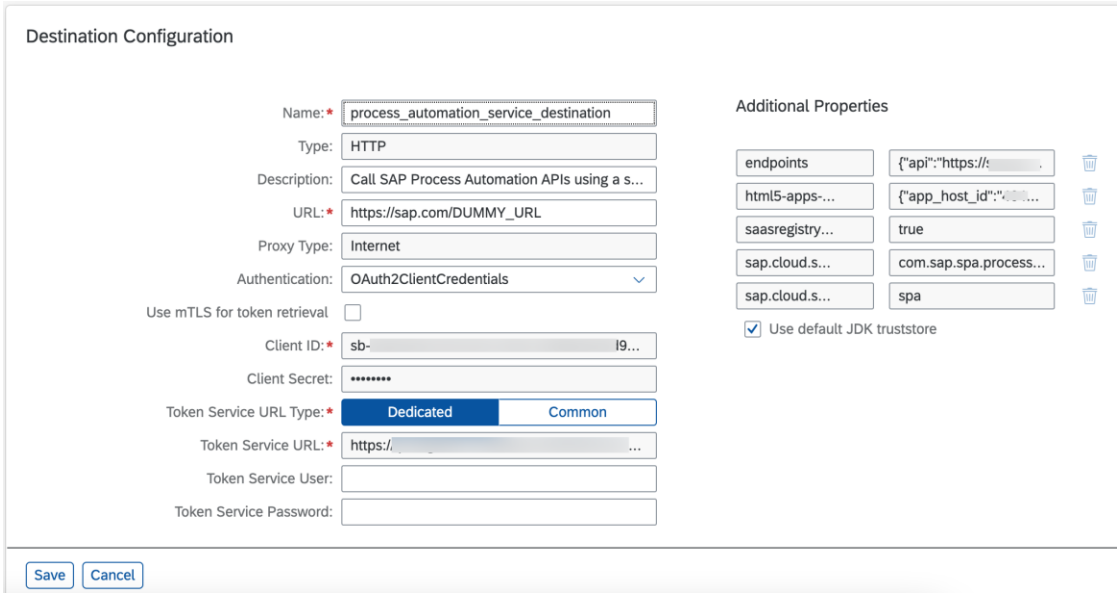
Configure OAuth2ClientCredentials SAP Build Process Automation Destination (Service Instance)

Ignore this step if there is already a destination using SAP Build Process Automation service instance created.

Create new destination to call SAP Build Process Automation APIs using a service route from SAP UI5 component. For more details, follow the help document:

https://help.sap.com/viewer/cca91383641e40ffbe03bdc78f00f681/Cloud/en-US/685f383cebb54c009b2fac633b32c90f.html.





Configure SAP Workflow Management

Retail Sales Price Update content package requires SAP Workflow Management subscription or a CPEA contract. Follow the setup and configuration section of SAP Workflow Management.

https://help.sap.com/viewer/6f55baaf330443bd8132d071581bbae6/Cloud/en-US/d7910e2bf7f64afc9d0eb21b0cc9e84d.html

Note: While creating the service instance for Workflow service, make sure that at least the following scopes are assigned (help documentation to enable technical authentication to access the workflow APIs). If the scopes are not assigned, you can also update the service instance with the following scopes.

- WORKFLOW_INSTANCE_GET
- WORKFLOW_INSTANCE_START

Configure Workflow Email Destination

Configure workflow email destination to automatically send email notification to the involved parties. For more information on configuring the destination, see configure workflow email destination.

Configure Workflow Destination

A HTTP destination is required in the BTP subaccount where SAP Workflow Management is subscribed. Create a destination with name "Workflow" with the following configuration, if it doesn't exist already. Please refer how to create a HTTP destination OAuth 2.0 Authentication (client credentials).

Name	Workflow
Type	HTTP
Proxy Type	Internet
Authentication	OAuth2ClientCredentials
URL	<rest_api_url>
Client ID	<client ID>
Client Secret	<client secret>
Token Service URL	<uaa.url>/oauth/token

Configure Business Rules Destination

A HTTP destination is required in the Cloud Foundry account where SAP Workflow Management is subscribed. Create a destination with name "BUSINESS_RULES" with the following configuration, if it doesn't exist already. Please refer how to create a HTTP destination and how to access business rules APIs using OAuth 2.0 Authentication (client credentials)

Name	BUSINESS_RULES
Type	HTTP
Proxy Type	Internet
Authentication	OAuth2ClientCredentials
URL	<rule_runtime_url>/rules-service
Client ID	<client ID>
Client Secret	<client secret>
Token Service URL	<uaa.url>/oauth/token

Configure Destination to Enable Start & Step Conditions

To enable the usage of start conditions and step conditions on a process variant, create a destination for business rules with the configuration as mentioned in the following help document:

https://help.sap.com/viewer/6f55baaf330443bd8132d071581bbae6/Cloud/en-US/543b5dbd77d940b4b1f972298b559911.html?q=WM_BUSINESSRULES

Configure Cloud Integration Destination

To call an integration flow, a HTTP destination is required in the SAP BTP tenant where the SAP Workflow Management is subscribed. Create a destination called CPI with either Basic Authentication or OAuth2ClientCredentials.

Destination with Basic Authentication

Name	CPI
Type	HTTP
Proxy Type	Internet
Authentication	Basic Authentication
URL	<runtime.url>
Username	<user>
Password	<password>

Destination with OAuth2ClientCredentials Authentication

Name	CPI
Type	HTTP
Proxy Type	Internet
Authentication	OAuth2ClientCredentials
URL	<runtime.url>
Client Id	<client ID>
Client Secret	<client secret>
Token Service URL	<oauth.url.for.clientCredentials>

Additional Properties to Destination

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

WebIDEEnabled	true
WebIDESystem	CPI
WebIDEUsage	odata_gen

Configure SAP S/4HANA Destination

Configure a HTTP destination to connect with SAP S/4HANA on-premise or SAP S/4HANA Cloud, refer to documentation here for the same. The below is a destination configuration for for SAP S/4HANA on-premise .

Name	S4HANA
Type	HTTP
Proxy Type	OnPremise
Description	
User	<TECHNICAL_USER>
Password	<PASSWORD>
Authentication	BasicAuthentication
Additional Properties	HTML5 Dynamic : True Product name : SAP S/4HANA Sap-client:<client id> WebIDE Enabled : True WebIDEUsage: Odata_gen.odata_abap

Configure RFC Destination

Name	S4E or <any name, but make sure that the destination name in integration flow is a configurable parameter>
Type	RFC
Proxy Type	OnPremise
Description	S4E
User	<TECHNICAL_USER>
Password	<PASSWORD>
Authentication	BasicAuthentication
Additional Properties	Name: jco.client.ashost Value: <abapServerHost> Name: jco.client.client Value: <client id> Name: jco.client.sysnr Value: <systemNumber>

Configure Cloud Connector

For SAP S/4HANA on-premise landscape, configure cloud connector to enable secure tunnel to SAP BTP tenant for RFC calls. Please refer the help documentation to configure Cloud Connector.

Expose the Following BAPI/RFC in the SAP Cloud Connector:

- BAPI_RPC_CALCULATE_PRICES
- RFC_READ_TABLE – To fletch Plant Group, Price Sequence details from S4HANA we used this RFC in the integration flows for F4 Help from SAP S4HANA to UI Fields.

Import, configure and deploy cloud integration content

This package utilizes Cloud Integration capability within SAP Integration Suite to provide integration between SAP ERP (or SAP S/4HANA) and SAP Build Process Automation or SAP Workflow Management.Further details can be found in dedicated integration guide of the integration package "**SAP Workflow Management Integration with SAP S/4HANA - Retail Sales Price**".

Determine Approvers from External Service

Based on conditions that can be configured in the business rule, the approvers can be determined using a business rule configured in the BTP tenant or the approvers can be retrieved from any backend system like HR systems, SAP S/4HANA, etc. If the approvers need to be determined by an external service, then a new integration flow shall be implemented with the following information:

API Attributes	Values
Path	/http/comsapcontentRetailSalesApprover
HTTP Method	POST
Input payload to integration flow sent by workflow (with sample data)	{ "Vocabulary": [{ "RetailSalesData": { "MarkupPrice":5, "SalesOrganisation":"0001", "Plant":" DC01", "DistributionChannel":"01", "Role":"Merchandise Team" }] }
Response Payload from integration flow	{ "Result": [{ "ApproverDetails": { "Duration": <integer> "UnitOfTime": <"H" OR "M" OR "m" OR "Y" OR "D">, "ApproverMailID": "abc@email.com", "ApproverUserID": " <UserID>", "ApproverUserGroup": "<UserGroup>"

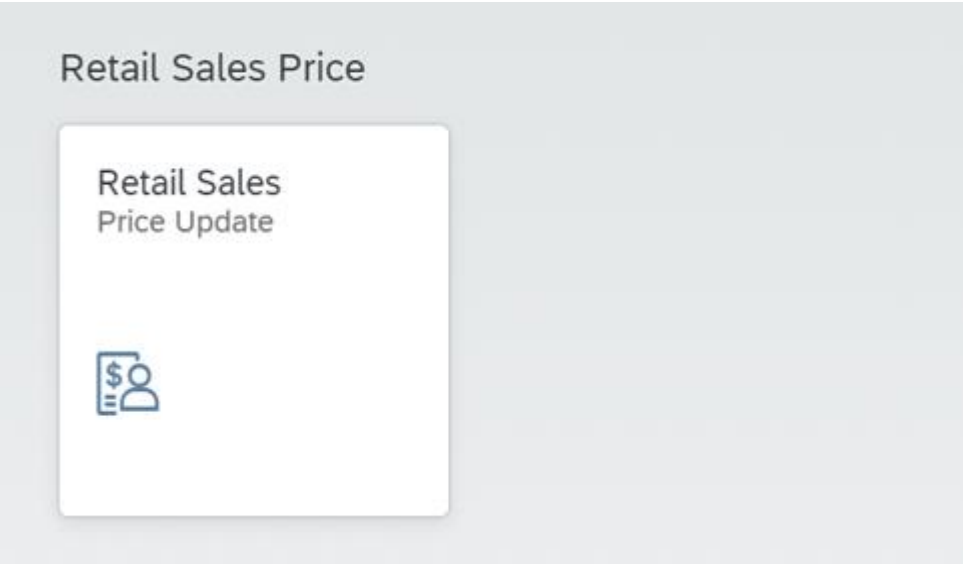
	} }] } Note: When Status is not 200, then it is considered a failed service call.
Payload Type	Application / JSON

Configure SAP Central Fiori Launchpad Site for SAP Workflow Management

If you plan to use SAP Launchpad service, then configure SAP Central Fiori Launchpad Site with Workflow Applications using help documentation.

To configure the Fiori Launchpad tile, subscribe to the Launchpad service from the subaccount and launch the service. Create a site in 'Site Directory'. In Provider Manager, load the standard apps of the workflow capability from HTML5 Apps content provider.

In Content Manager, all the HTML5 App are available. From Content Explorer choose the app "Retail Sales"and add it to My Content. In My Content section, create a local copy of Retail Sales and customize the tile as required. Finally, add the app to the required group and role.



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:
    1. Click on Custom CDS app in Fiori Launchpad.
    2. Refer the details for Material Field, Select standard CDS view name - I_ProductText and click on Create button.
    3. 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
    4. After SAVE click on publish button to create API- ZZ1_MATERIAL_CDS which is used to register OData service.
    5. 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:

    1. Go to t-code "/IWFND/MAINT_SERVICE"
    2. Click on "Add Service"
    3. Select the required System Alias
    4. Enter Technical Service Name as "ZZ1_MATERIAL_CDS" and click on "Get Services"
    5. Select "ZZ1_MATERIAL_CDS" and click on "Add Selected Services"
    6. Enter the required package and click on OK.
    7. Repeat steps 1 to 6 for below Technical Services

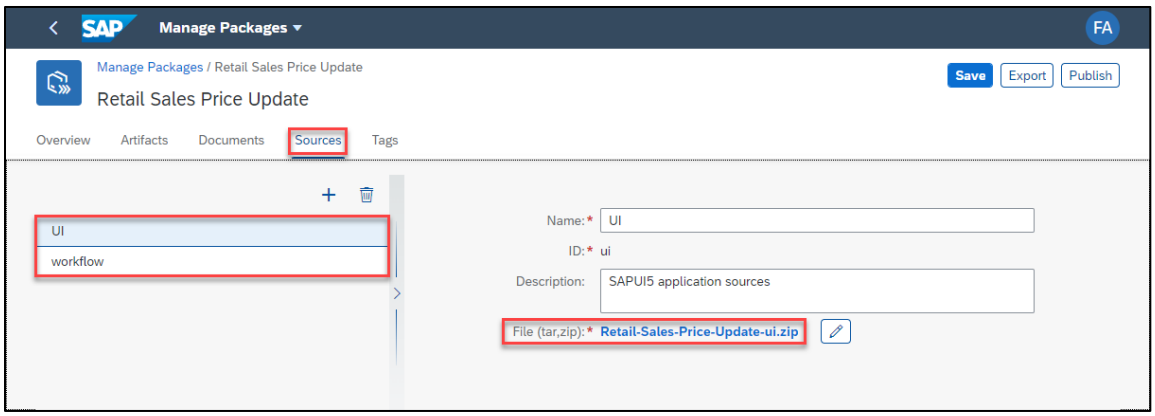
Repeat steps 1 to 6 for below Technical Service

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, ProductName
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

Optional: Making Custom changes in SAP Workflow Management

Prerequisite: an account with access to SAP Business Application Studio as well as space developer permissions in BTP.

The source code for both the process and the SAPUI5-based user interfaces are available as part of the content package. With this, custom modifications can be implemented to adapt the content for specific needs.



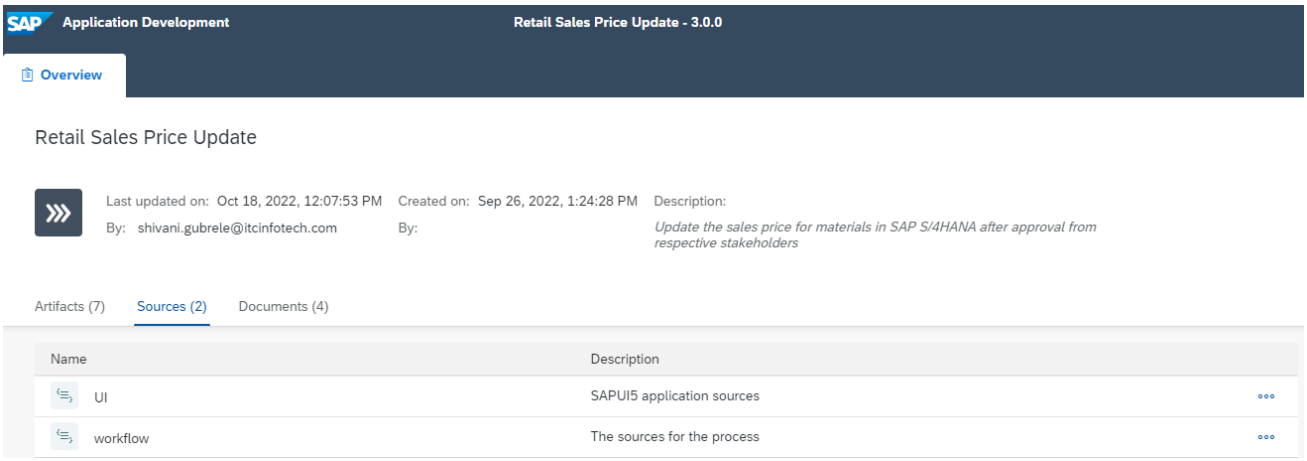
- in **Manage Package** app, select **Sources** tab
- select the archive you want to download in the list on the left side
- click on the blue filename behind **File (tar, zip)** to download the attached source archive
- Import the archive into SAP Business Application Studio
- make any necessary modifications
- Build and deploy the MTA archive, using the space developer credentials

Please refer to the documentation for SAP Business Application Studio, the documentation for Modeling a Workflow and the documentation for Creating User Interfaces for details.

Optional: Making Custom changes in SAP Build Process Automation

Prerequisite: an account with access to SAP Business Application Studio as well as space developer permissions in BTP.

The source code for both the process and the SAPUI5-based user interfaces are available as part of the content package. With this, custom modifications can be implemented to adapt the content for specific needs.



- in Application Lobby, search the package name and select Sources tab
- select the archive you want to download in the list on the left side
- click on the blue filename behind File (tar, zip) to download the attached source archive
- Import the archive into SAP Business Application Studio
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