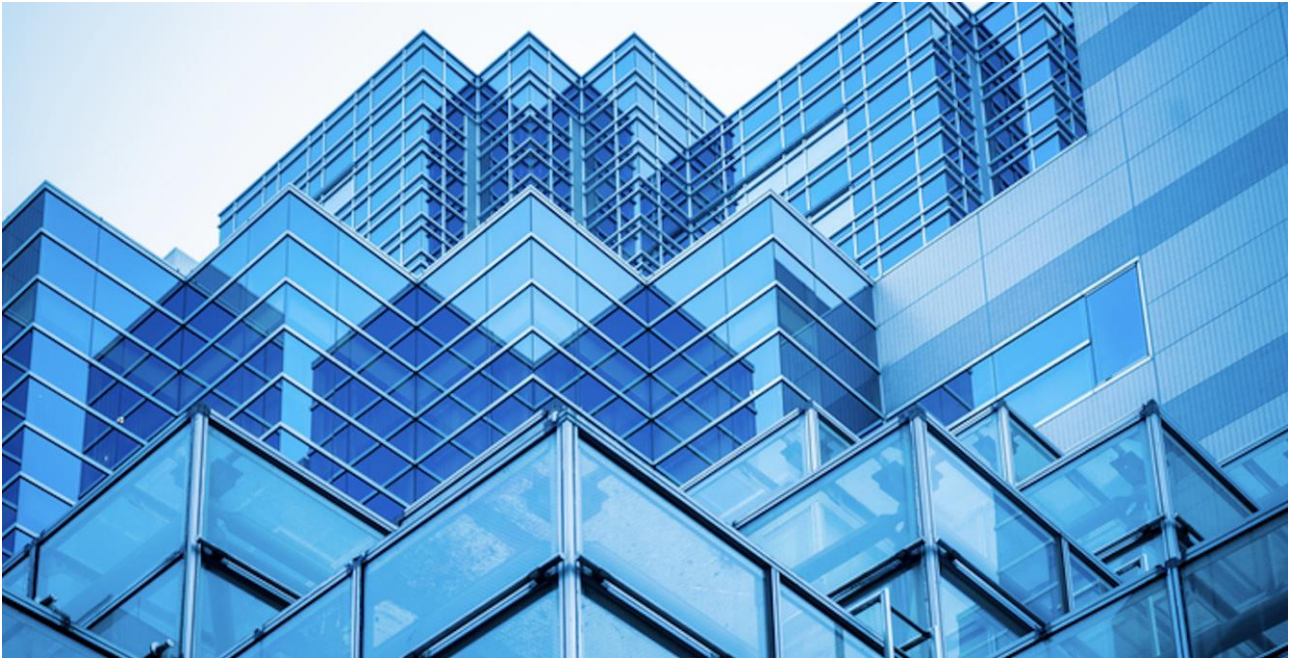




PUBLIC

SAP Build Process Automation

Supplier Lock Configuration and User Guide

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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 contain 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.
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 – Supplier Lock to run. The main audience of this document are technical personas like IT Administrators or Developers.

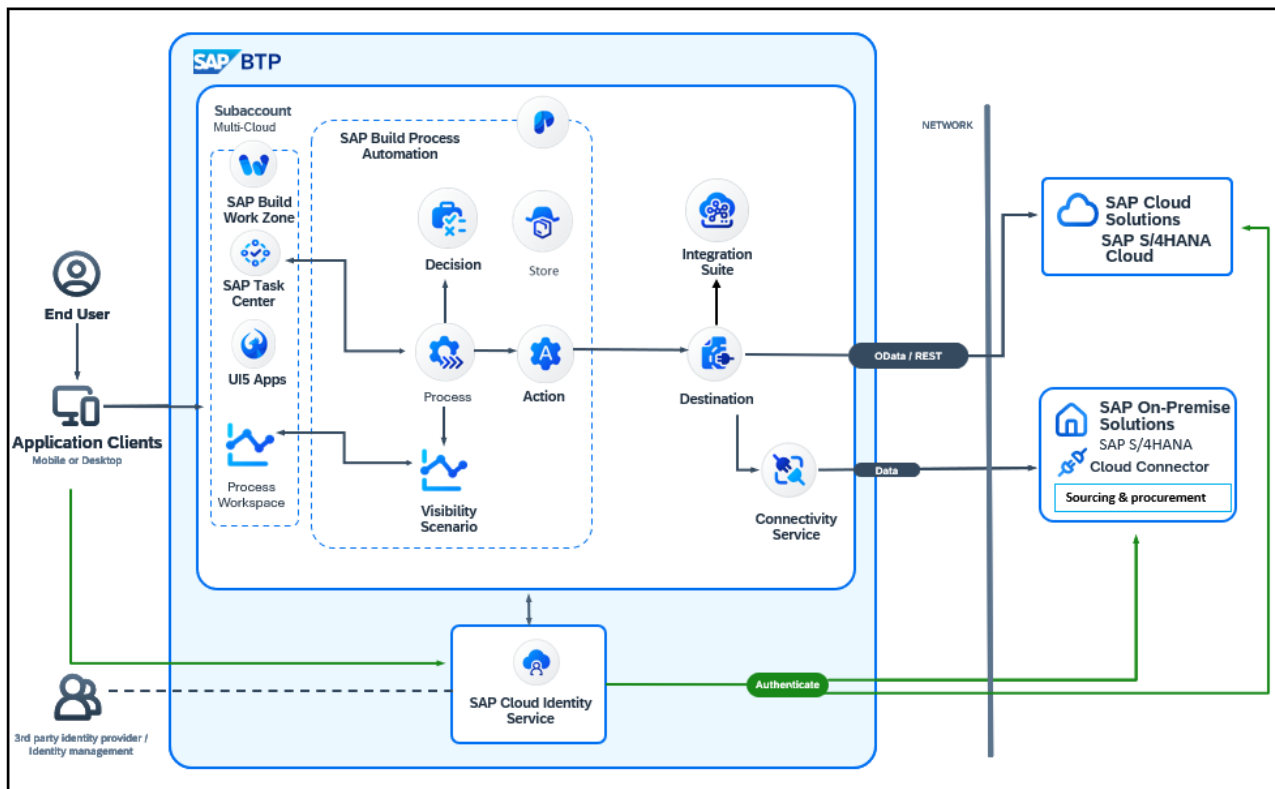
In situations, where a company decides to remove a supplier from their business network (e.g. to change to a different supplier), some actions need to be taken. In this situation, it is necessary to evaluate all business relations with the old supplier by analyzing source list entries, valid info records, open contracts and find suitable replacements. This can be done by sending out a request for quotation(RFQ) for each material without source.

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

Features:

- Automatic detection of locked suppliers
- Compilation of affected materials
- Automatic email notification to parties involved with the logged material details
- Out-of-the-box visibility into key process performance indicator

Process Flow Diagram



Solution flow :

1. The supplier is manually locked centrally in SAP S/4HANA by updating the supplier master data. The integration flow named "Get Rejected Lot" detects the locked supplier and triggers the process to manage the impacted materials.
2. A list of materials associated with the locked supplier is compiled, including those from purchase contracts, central purchase contracts, purchasing info records, and purchase source list and combined into a single list.
3. The purchaser receives a task in the "My Inbox" application to review the list of affected materials and decides on necessary actions.
4. The purchaser selects relevant materials for request for quotation creation and provides details such as requested quantity, quotation deadlines, delivery dates and bidders.
5. The purchaser identifies and selects bidders for each request for quotation, finalizing the necessary details to proceed.
6. The process creates request for quotation documents in SAP S/4HANA for the selected materials and sends automatic email notifications and a task containing the created materials list and irrelevant materials list to the involved parties MyInbox.
7. The process concludes with request for quotation documents successfully created and shared with bidders, ensuring continuity in procurement operations despite the supplier lock.

Required SAP Business Technology Platform Services

The following SAP Business Technology Platform services are required to consume the **Supplier Lock**:

- SAP Build Process Automation
- SAP Connectivity service
- SAP Business Application Studio
- SAP Application Runtime Service

- SAP Integration Suite
- 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

- 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 Supplier Locks 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

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

Setup SAP S/4HANA

Setup Communication

To run this template, you must have a communication user, create communication arrangements between the communication user and the following communication scenarios, 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](#)

List of communication scenarios to be configured.

Communication Scenario	Related API
Central Purchase Contract	Overview Central Purchase Contract SAP Business Accelerator Hub
Business Partner (A2X)	Overview Business Partner (A2X) SAP Business Accelerator Hub
Purchasing Info Record	Overview Purchasing Info Record SAP Business Accelerator Hub
Purchasing Source List	Overview Purchasing Source List SAP Business Accelerator Hub
Purchase Contracts (Version 2)	Overview Purchase Contracts (Version 2) SAP Business Accelerator Hub
Request for Quotation	Overview Request for Quotation SAP Business Accelerator Hub

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://<Integration Suite>.hana.ondemand.com">https://<Integration Suite>.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/API_PURCHASECONTRACT_PROCESS_SRV/A_PurchaseContract	OData	SAP S/4HANA
/sap/opu/odata/sap/API_BUSINESS_PARTNER/A_BusinessPartner	OData	SAP S/4HANA

/sap/opu/odata/sap/API_CENTRAL_PURCHASECONTRACT_SRV/A_CentralPurchaseContract	OData	SAP S/4HANA
/sap/opu/odata/sap/API_INFORECORD_PROCESS_SRV/A_PurchasingInfoRecord	OData	SAP S/4HANA
/sap/opu/odata/sap/API_PURCHASING_SOURCE_SRV/A_PurchasingSource	OData	SAP S/4HANA
/sap/opu/odata/sap/API_RFQ_PROCESS_SRV/A_RequestForQuotation	OData	SAP S/4HANA
/sap/opu/odata/sap/ZZ1_CurrencyValueHelp_CDS/ZZ1_CurrencyValueHelp	OData	SAP S/4HANA
/sap/opu/odata/sap/ZZ1_PlantValueHelp_CDS/ZZ1_PlantValueHelp	OData	SAP S/4HANA
/sap/opu/odata/sap/ZZ1_PurchasingGroupValueHelp_CDS/ZZ1_PurchasingGroupValueHelp	OData	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 “**Supplier Lock**”
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 “**Supplier Lock**” 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 Supplier Lock Process content package. Below are details of Task UI application

Task UI Application: SupplierLockUI

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

- Download the SAPUI5 application Task UI from the imported store project.
- Open Business Application Studio and import the previously downloaded SAPUI5 project.
- Build SAPUI5 project using mta.yaml file and the generated project (generated mtar file will be available in the mta_archives 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 3 decisions in this template. We can configure as required.

1. Determine Process Admin

Decision to determine the process admin if no purchaser is determined. To modify the decision:

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

The screenshot shows the SAP Process Editor interface. On the left, a process diagram illustrates the flow: an 'Input' node leads to a 'Decision' node, which then leads to a 'Result' node. The 'Decision' node is expanded, showing two rules. The first rule is selected, and its configuration is displayed on the right. The configuration includes input parameters and output parameters.

Determine Process Admin

Description: Decision to determine the process admin if no purchaser is determined.

Inputs/Output Rules Variables

Input Parameters

Name *	Description *	Type *	List
PurchaseOrganization	Contains all the details for purchase orga...	String	☐

Output Parameter

☐ Same as Input

Name *	Description *	Type *	List
Process Admin Details	Contains all the details for process admin.	Process Admin Details	☐

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

The screenshot shows the SAP Process Editor interface. On the left, a process diagram illustrates the flow: an 'Input' node leads to a 'Decision' node, which then leads to a 'Result' node. The 'Decision' node is expanded, showing two rules. The first rule is selected, and its configuration is displayed on the right. The configuration includes a decision table.

Determine Process Admin

General Information: Status: Draft Hit Policy: FIRST MATCH

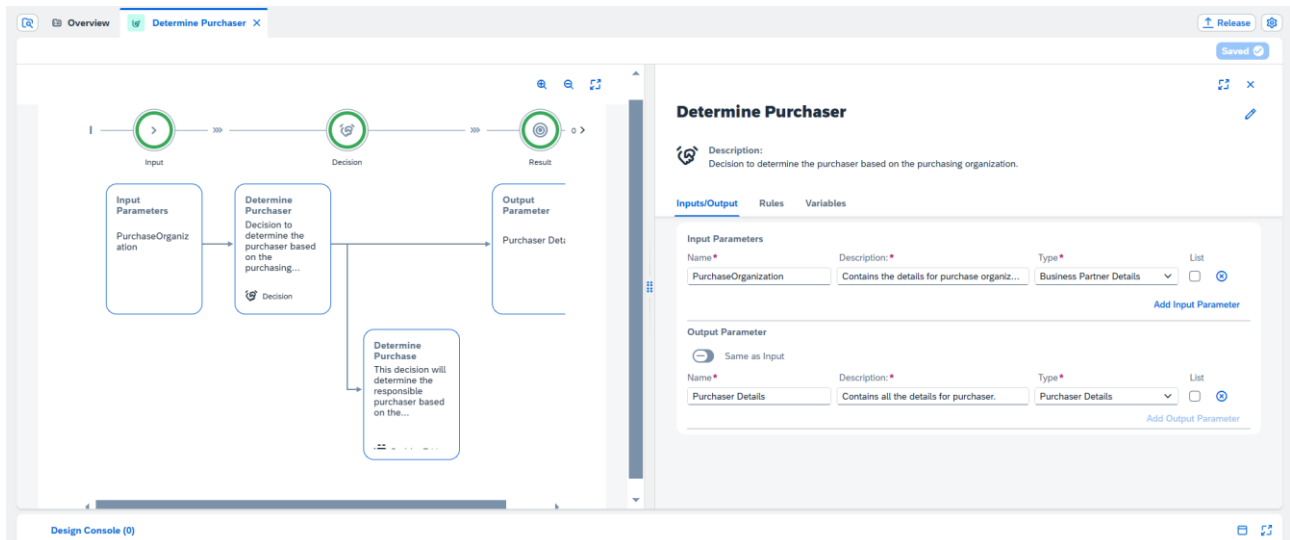
Description: Decision to determine the process admin if admin is not assigned.

Decision Table

If	Then
☐ Purchase Organization	ProcessAdminEmail ProcessAdminUserId ProcessAdminGroup
☐	

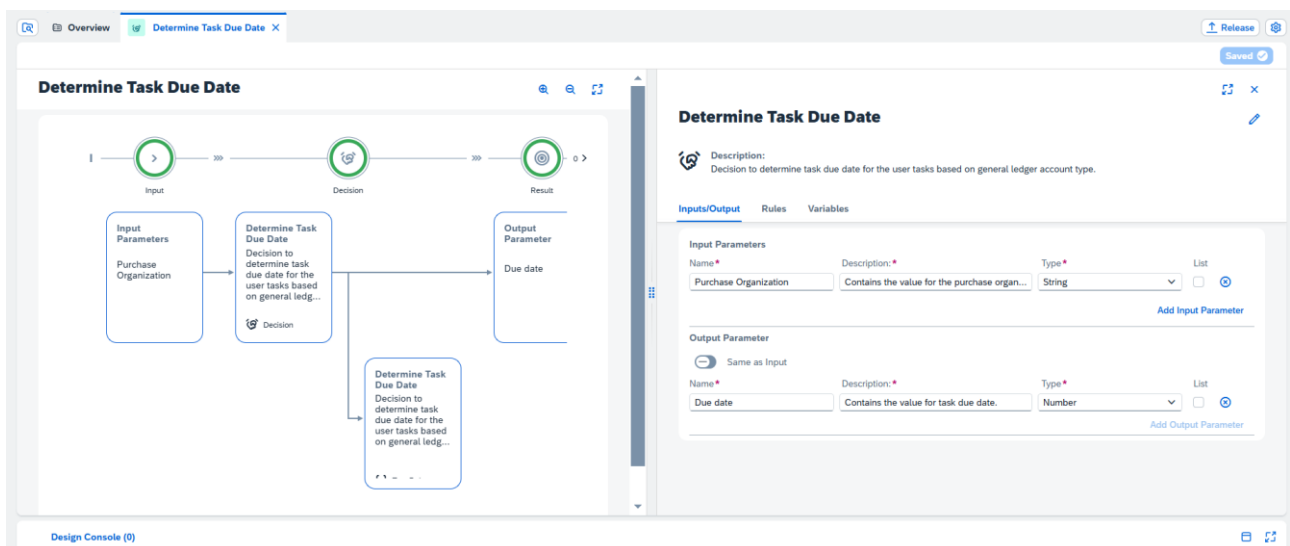
2. Determine Purchaser

Decision to determine the purchaser based on the purchasing organization.



3. Determine Task Due Date

Decision to determine task due date for the user tasks based on general ledger account type.



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**'.

Dear process admin,

The workflow for Supplier  Supplier encountered a business rule error when looking up for a purchaser. Please access the task in My Inbox and decide on how to proceed further.

This is an automated mail, please do not respond to it.

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](#)

In case any further extension needs to be made then follow the reference links below.

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: [SAP Build Process Automation](#)

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.

S4HANA: Business Technology Platform destination to connect with SAP S/4HANA system. As shown in SAP S/4HANA 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.

User Guides

Capabilities

The following are the capabilities of this template:

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

Type	Name	Description
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Decision	Determine Process Admin	Decision to determine the process admin if no purchaser is determined.
Decision	Determine Purchaser	Decision to determine the purchaser based on the purchasing organization.
Decision	Determine Task Due Date	Decision to determine task due date for the user tasks based on general ledger account type.
Process	Create Single RFQ Document	Process for creating an RFQ document for the selected material.
Process	Decide Material Action Process	Process to decide the material action by the purchaser.
Process	Finalization Process	Process to finalize the Supplier Lock process by marking irrelevant materials, creating RFQs for required ones, and sending a summary email with the details.
Process	Initialize List of Materials	Process to get the list of all the materials for the locked supplier number.
Form	Decide Action Form	Form to review the material details, assign bidders and to create single RFQ document for the selected materials.
Form	IT Support - Task Owner Assignment	Form to assign the task owner if the purchaser is not found.
Form	List of irrelevant materials	Form to display all the irrelevant materials after the creation of request for quotation documents.
Form	List of RFQ Created Materials	Form to display all the RFQ created materials.
Data type	Bidder Details	Data type for maintaining the bidder details.
Data type	Business Partner Data	Data type for maintaining the organization details and material details
Data type	Business Partner Details	Data type for maintaining the business partner details.
Data type	Business Partner Material Details	Data type for maintaining the business partner material details.
Data type	Created RFQs Details	Data type for maintaining the created request quotation document material details.
Data type	Irrelevant Material Details	Data type for maintaining the irrelevant material details.
Data type	Material	Data type for maintaining the material details.
Data type	Materials Details	Data type for maintaining the business partner data.
Data type	Organization Details	Data type for maintaining the organization details.
Data type	Process Admin Details	Data type for maintaining the process admin details.

Data type	Process Control	Data type for maintaining the process control details.
Data type	Purchaser Details	Data type for maintaining the purchaser details.
Data type	RFQFalse Details	Data type to store the RFQ value for each material created.
Data type	Supplier Properties	Data type to store the payload from the integration suite.

Actions

Supplier Lock - Request for Quotation Action

This service enables the creation of RFQ documents in the SAP S/4HANA system. Once the RFQ has been successfully created, the RFQ number is sent in the response with the data included in the RFQ.

Method	API	API Path	Purpose
POST	/sap/opu/odata/sap/API_RFQ_PROCESS_SRV	/sap/opu/odata/sap/API_RFQ_PROCESS_SRV/A_RequestForQuotation	Updates the header details of a RFQ such as purchasing document category, quotation deadline, RFQ status and publishing date using the RFQ number provided.

Supplier Lock - Get Purchasing Source List Action

This service enables you to get details of a purchasing source record from SAP S/4HANA system.

Method	API	API Path	Purpose
GET	/sap/opu/odata/sap/API_PURCHASING_SOURCE_SRV	/sap/opu/odata/sap/API_PURCHASING_SOURCE_SRV/A_PurchasingSource	Gets the general information of the purchasing source list in the system.

Supplier Lock - Get Purchasing Info Records Action

This service enables you to create, update, and delete purchasing info records with conditions in SAP S/4HANA system.

Method	API	API Path	Purpose
GET	/sap/opu/odata/sap/API_INFORECORD_PROCESS_SRV	/sap/opu/odata/sap/API_INFORECORD_PROCESS_SRV/A_PurchasingInfoRecord	Gets the general information of the purchasing info record in the system.

Supplier Lock - Get Purchase Contract Action

This service enables you to read, create, and update purchase contracts through an API call from a source system outside SAP S/4HANA Cloud. The service contains header, item, account assignment, address and partner nodes.

Method	API	API Path	Purpose
--------	-----	----------	---------

GET	/sap/opu/odata/sap/API_PURCHASECONTRACT_PROCESS_SRV	/sap/opu/odata/sap/API_PURCHASECONTRACT_PROCESS_SRV/A_PurchaseContract	Gets the header details of all the purchase contracts in the system. This operation filters and sorts the returned data.
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Supplier lock - Get Business Partner Detail Action

This service enables you to create, display, update, and delete data related to business partner, supplier, and customer with the data provided in a payload, in the API call.

Method	API	API Path	Purpose
GET	/sap/opu/odata/sap/API_BUSINESS_PARTNER	/sap/opu/odata/sap/API_BUSINESS_PARTNER/A_BusinessPartner	Retrieves general data fields of all the business partner records available in the system.

Supplier Lock - Get Central Purchase Contract Action

This service allows purchasers from various parts of the company at different locations to take advantage of the negotiated global agreement with suppliers. This service is based on the OData protocol.

Method	API	API Path	Purpose
GET	/sap/opu/odata/sap/API_CENTRAL_PURCHASECONTRACT_SRV	/sap/opu/odata/sap/API_CENTRAL_PURCHASECONTRACT_SRV/A_CentralPurchaseContract	Gets the header details of all the central purchase contracts and central purchase contract hierarchies in the system. This operation filters and sorts the returned data.

Appendix

Configure Custom CDS View in SAP S/4HANA

CurrencyValueHelp

1. Open the Fiori Launchpad of your SAP S/4HANA system
2. Open the AppFinder
3. Search in category "All" for the App "Custom CDS Views"
4. Open "Custom CDS Views"
5. Create a new CDS View
6. Enter "CurrencyValueHelp" as the label and select "External API" as the Scenario
7. Create the View
8. Go into the view and in section "Data Sources", add a new Primary Data Source
9. Select I_Currency as the Data Source
10. Go to section "Elements"
11. Add the elements as shown below:
 - Currency (Path: I_Currency.Currency)
 - CurrencyISOCODE (Path: I_Currency.CurrencyISOCODE)
12. Publish your view

PlantValueHelp

1. Open the Fiori Launchpad of your SAP S/4HANA system

2. Open the AppFinder
3. Search in category "All" for the App "Custom CDS Views"
4. Open "Custom CDS Views"
5. Create a new CDS View
6. Enter "PlantValueHelp" as the label and select "External API" as the Scenario
7. Create the View
8. Go into the view and in section "Data Sources", add a new Primary Data Source
9. Select I_Plant as the Data Source
10. Go to section "Elements"
11. Add the elements as shown below:
 - Plant (Path: I_Plant.Plant)
 - PlantName (Path: I_Plant.PlantName)
 - DefaultPurchasingOrganization (Path: I_Plant.DefaultPurchasingOrganization)
 - PlantSupplier (Path: I_Plant.PlantSupplier)
12. Publish your view

PurchasingGroupValueHelp

1. Open the Fiori Launchpad of your SAP S/4HANA system
2. Open the AppFinder
3. Search in category "All" for the App "Custom CDS Views"
4. Open "Custom CDS Views"
5. Create a new CDS View
6. Enter "PurchasingGroupValueHelp" as the label and select "External API" as the Scenario
7. Create the View
8. Go into the view and in section "Data Sources", add a new Primary Data Source
9. Select I_PurchasingGroup the Data Source
10. Go to section "Elements"
11. Add the elements as shown below:
 - PurchasingGroup (Path: I_PurchasingGroup.PurchasingGroup)
 - PurchasingGroupName (Path: I_PurchasingGroup.PurchasingGroupName)
12. Publish your view

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.

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