



PUBLIC

SAP Build Process Automation

Mass Creation of Request for Quotation from Purchase Requisitions Template

Configuration and User Guide

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CHANGE LOG

Version	Date	Description
1.0.0	August 7 2023	Document Created

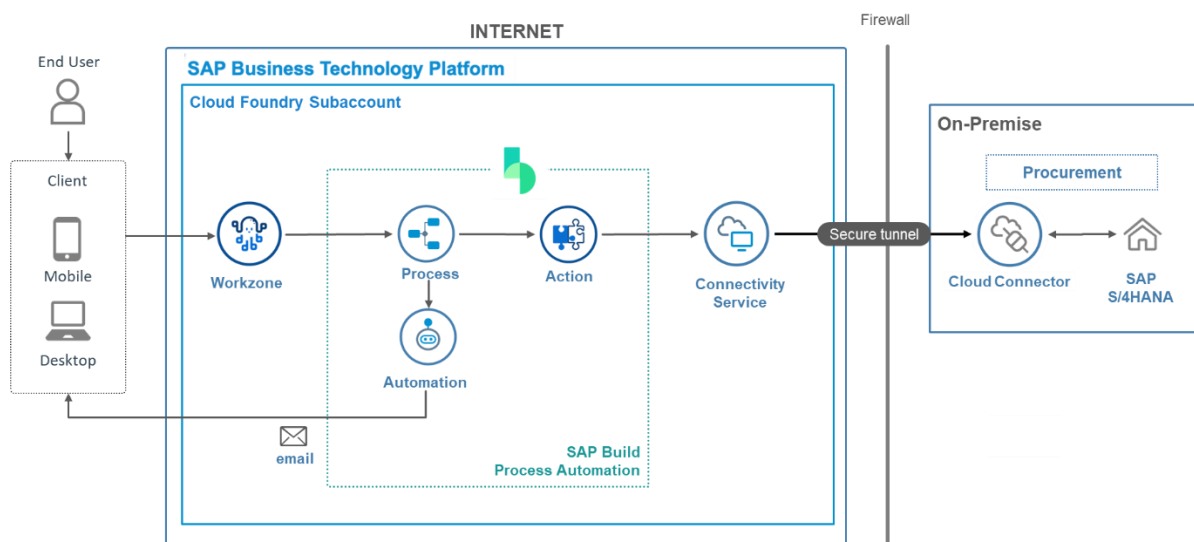
OVERVIEW

This document provides information about setting up the SAP Business Technology Platform account to consume the SAP Build Process Automation **Periodic Automatic Creation of Request for Quotation from Purchase Requisition Template**. The main audience of this document are technical IT/system administrators.

Automation facilitates to mass creation of Request for Quotation from Purchase Requisition

Features

- The Automation must be able to automatically fetch the Purchase Requisition from the S4 System with the inputs given.
- The Automation must be able to automatically export the fetched list of Purchase Requisition on an Excel sheet.
- The Automation must be able to automatically send the generated Purchase Requisition Excel as an email to the Requestor.
- The Automation must be able to automatically create the Request for Quotation from the updated Purchase Requisition Excel
- The Automation must be able to automatically publish the Request for Quotation created.
- The Automation must be able to automatically generate an Excel spreadsheet-based log for the Request for Quotation which have been created and published.
- The Automation must be able to automatically send the Request for Quotation Excel log created as an email to the Requestor.



1. Fetch all the Purchase Requisitions from SAP S/4HANA based on the user inputs.
2. Excel with fetched Purchase Requisition data and sent as an email to the requestor.
3. Requestor updates the excel file offline and places the file on a predefined folder.

4. Automation reads the excel file and calls POST API to create and publish Request for Quotation.
5. Create an excel log of created and published Request for Quotation. Log sent as an email to the requestor.

PREREQUISITES

The following SAP Business Technology Platform services are required to consume the content package.

Manage Request for Quotation Creation:

- 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

CONFIGURATION GUIDE

Periodic Automatic Creation of Request for Quotation from Purchase Requisition template requires SAP Build Process Automation subscription or CPEA contract. Follow the [setup and configuration section](#)

Setup Business Technology Platform Cockpit

Destination Configuration

Configure Destination to Connect to S/4HANA Cloud System

Destination Property	Value
Name	<Name>
Type	HTTP
URL	<URL>
Proxy Type	Internet
Authentication	<Authentication Type>

Note: Add configurations for the authentication type chosen

Destination Additional Property	Value
HTML5.DynamicDestination	True
sap.applicationdevelopment.actions.enabled	True
sap.processautomation.enabled	True

Destination Configuration

Name: *
CU6System

Type:
HTTP

Description:
S/4 Hana System

URL: *
https://

Proxy Type:
Internet

Authentication:
BasicAuthentication

User: *

Password:

Additional Properties

New Property

HTML5.Dynam...	true	
sap.application...	true	
sap.processaut...	true	

Save
Cancel

Note: For SAP S/4HANA Cloud and on-premise, the API should be accessible over internet proxy type, as iRPA Automation does not support on-premise as proxy type as explained in the [SAP Note](#).

User Roles Configuration:

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

Role Name	Purpose
Process Automation Developer	To fully use this content package, you need to have an active user entitled to this role to use SAP Build Process Automation

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

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.

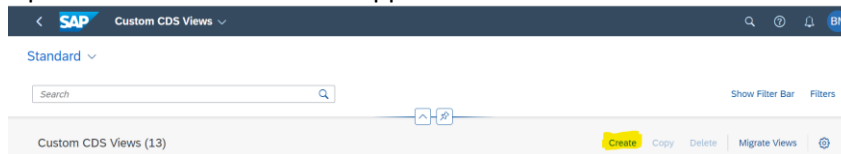
Steps to Create Communication System and Communication Arrangement are available in below documentation links:

[How to Create Communication Systems | SAP Help Portal](#)

Communication Scenario	Related API
Procurement Master Data Integration(SAP_COM_0116)	Overview Purchase Organization - Read SAP Business Accelerator Hub
Procurement Master Data Integration(SAP_COM_0116)	Overview Purchasing Group - Read SAP Business Accelerator Hub
Purchase Requisition Integration(SAP_COM_0102)	Overview Purchase Requisition SAP Business Accelerator Hub
Purchase Request for Quotation Integration(SAP_COM_0113)	Overview Request for Quotation SAP Business Accelerator Hub
An additional communication scenario assigned with custom inbound services	You need to create custom CDS views in your SAP S/4HANA Cloud system, expose them as external APIs, and then create a communication scenario and add these inbound services to this scenario. For details, see next section.

Configure Custom CDS Views and Create Additional Communication Scenario

1. Open the **Custom CDS Views** app.



2. Click **Create** and select the scenario **External API**.
Name - **ZZ1_Plant_VH**

Create Custom CDS View

Label: *

Plant_VH

Name: *

ZZ1_Plant_VH

Scenario: *

External API

Create Cancel

3. Select your **Primary Data Source** – I_Plant

Navigation: Data Sources » Parameters » Elements » Element Properties » Filter » Log » Tasks » Next Steps

Data Sources

Name	Alias	Type	Cardinality	Status	Parameters
No data source added yet. Click Add to select a CDS view as basis.					

Add Delete

Primary Data Source
Associated Data Sources

Select: Primary Data Source

I_Plant

Show Filter Bar Filters (2)

Data Sources (83)

Name	Label	Source Origin	Modeling Data Source	Mode
I_Plant	Plant	ABAP Development Tools	✓	

4. Go To Elements Tab and add **Elements** –Plant and PlantName

The screenshot shows the 'Data Sources' app interface. The breadcrumb navigation includes: Data Sources, Parameters, Elements, Element Properties, Filter, Log, Tasks, and Next Steps. The 'Data Sources (1)' table has the following columns: Name, Alias, Type, Cardinality, Status, Parameters, and Join Condition. One data source is listed: I_Plant, with Alias I_Plant, Type Primary Datasource, and Status Released. At the bottom right, there are buttons: Publish, Check, Preview, Cancel, and Inventory.

5. Check and Publish

The screenshot shows the 'Elements' app interface. The breadcrumb navigation includes: Data Sources, Parameters, Elements, Element Properties, Filter, Log, Tasks, and Next Steps. The 'Elements (2)' table has the following columns: Key, Alias, Type, Path, Label, Calculation, and Status. Two elements are listed: Plant (Type CHAR (4), Path I_Plant.Plant, Label Plant) and PlantName (Type CHAR (30), Path I_Plant.PlantName, Label Plant Name). At the bottom right, there are buttons: Publish, Check, Preview, Cancel, and Inventory.

6. Open the **Communication Scenarios** app and create a new communication scenario.
7. Add the inbound services *CustomCDSViewName*_CDS to the communication scenario and publish it:
 - **ZZ1_Plant_VH_CDS**
8. Open the **Communication Arrangements** app and create a communication arrangement based on this newly created custom communication scenario.
9. In the **Communication System** field under **Common Data**, select the communication system that you have created following the **Create Communication System** step mentioned [How to Create Communication Systems | SAP Help Portal](#).

Save your entries.

Setup Build Process Automation:

Standard automation packages released by SAP will be available at the [SAP Build Store](#)

Import Content

This template can be downloaded from the Store:

1. Navigate to the Store in your SAP Build Process Automation account.
2. Select the Project Type filter as “Process Automation.”
3. In the Search bar type **“Periodic Automatic creation of Request for Quotation from Purchase Requisition”**
4. Select the “Add” button to add the template into you lobby.
5. After successfully adding the template, navigate back to the lobby to find the “Periodic Automatic creation of Request for Quotation from Purchase Requisition” template available for use.

Configure Automation

This content can be used without any configuration, if you still wish to update it based on the requirements, follow the below links

Create and Manage Projects

<https://help.sap.com/docs/build-process-automation/sap-build-process-automation/create-and-manage-projects>

Process Artifacts

<https://help.sap.com/docs/build-process-automation/sap-build-process-automation/process-artifacts>

Automation Artifacts

<https://help.sap.com/docs/build-process-automation/sap-build-process-automation/automation-artifacts>

Manage Existing Artifacts

<https://help.sap.com/docs/build-process-automation/sap-build-process-automation/manage-existing-artifacts>

Create an Automation

<https://help.sap.com/docs/build-process-automation/sap-build-process-automation/create-automation-process-automation>

Configure Process

<https://help.sap.com/docs/build-process-automation/sap-build-process-automation/create-business-process>

Configure Forms

<https://help.sap.com/docs/build-process-automation/sap-build-process-automation/create-form>

Configure Datatype

<https://help.sap.com/docs/build-process-automation/sap-build-process-automation/create-data-type-process-automation>

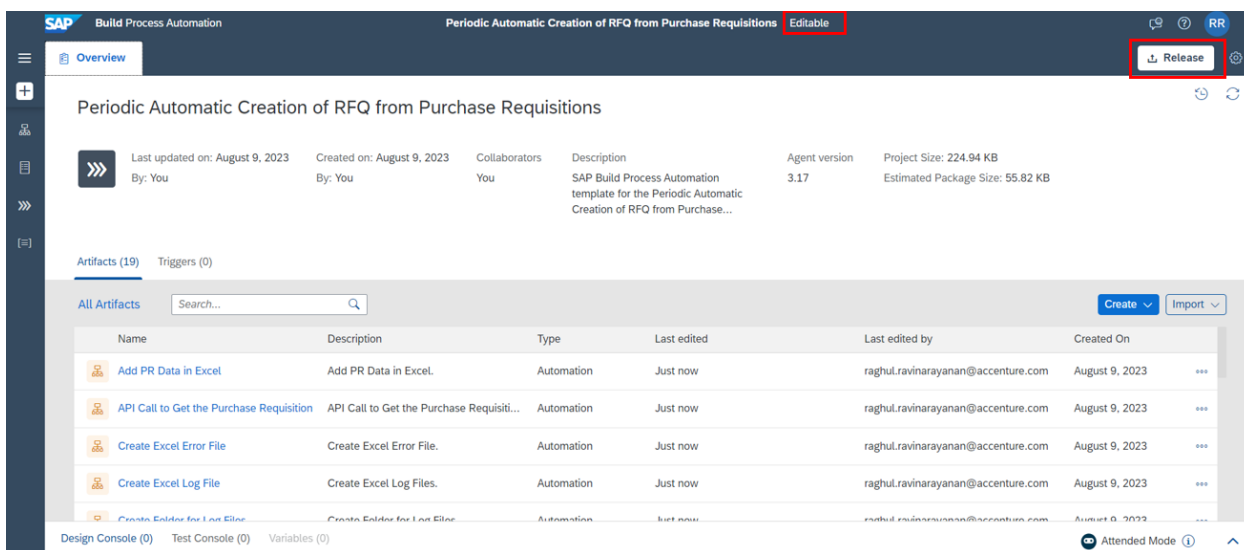
Release and deploy the process

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.'



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

Deploy – 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 the 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"

To deploy your project, you will be prompted to provide a Destination as an environment variable. Select the destination from the drop-down. Note: If you do not map your destination environment variable with actual SAP BTP destination during deployment, then the process will enter Erroneous state when it tries to connect to the external system.

SAP Build Process Automation

Periodic Automatic Creation of RFQ from Purchase Requisitions 1.0.0 Released

Overview

Periodic Automatic Creation of RFQ from Purchase Requisitions Released

Last updated on: August 9, 2023
 By: You

Created on: August 9, 2023
 By: You

Collaborators
 You

Description
 SAP Build Process Automation template for the Periodic Automatic Creation of RFQ from Purchase Requisitions through ...

Agent version
 3.17

Project Size:
 239.34 KB

Artifacts (19) Triggers (0)

All Artifacts Search...

Name	Description	Type
Add PR Data in Excel	Add PR Data in Excel.	Automation
API Call to Get the Purchase Requisition	API Call to Get the Purchase Requisition with no valid source of supply.	Automation
Create Excel Error File	Create Excel Error File.	Automation
Create Excel Log File	Create Excel Log Files.	Automation

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

USER GUIDE

Capabilities

Icon	Type	Name	Description
	Automation	Get Purchase Requisition Details	Fetch the PR for the given inputs triggered from the form
	Automation	Create RFQ from PRs	Automation triggered in unattended mode to create and publish Request for Quotation from PRs
	Automation	Add PR Data in Excel	Fetches PRs are added in the Excel
	Automation	API Call to Get the Purchase Requisition	GET list of Purchase Requisition
	Automation	Create Excel Error File	Create Excel file to fetch the error message
	Automation	Create Excel Log File	Create Excel file to Log the PRs
	Automation	Create Folder for Log Files	Create Folder to place the Log Excel
	Automation	Create Logs for Publishing RFQ	Create Excel to Log the published REQUEST FOR QUOTATION
	Automation	Create RFQ Excel Log File	Create Excel to Log the REQUEST FOR QUOTATION
	Automation	Create Success and Error Logs	Create Success and Error Logs in Excel
	Automation	Post API call to create RFQ	POST method to create Request for Quotation from PR
	Automation	Post API call to publish RFQ	POST method to publish Request for Quotation created
	Automation	Read Excel Data	Read the PR Excel Data
	Automation	Send Email to Administrator	Send Email to Administrator if there is no Requestor email is provided
	Automation	Send PR Data Email to Requestor	Send email to Requestor with PR Data

	Automation	Send RFQ Report to Requestor	Send email to Requestor with Request for Quotation Report
	Process	Process to get Purchase Requisition Details	Get the Purchase Requisition Details
	Form	Filter Criteria Details Form	Gets the input to fetch the PRs
	Data type	Process Input Details	To get the Input Details from Filter Criteria Details Form

This content package will enable SAP ERP customers to automate the creation of Request for Quotation from Purchase Requisition in SAP S/4HANA System. The purpose of this technical specification is to outline the process and requirements for the mass creation of Request for Quotation from Purchase Requisitions. This specification also includes the necessary table and field mappings within SAP, as well as the latest API to be used for creating and Publishing Request for Quotation.

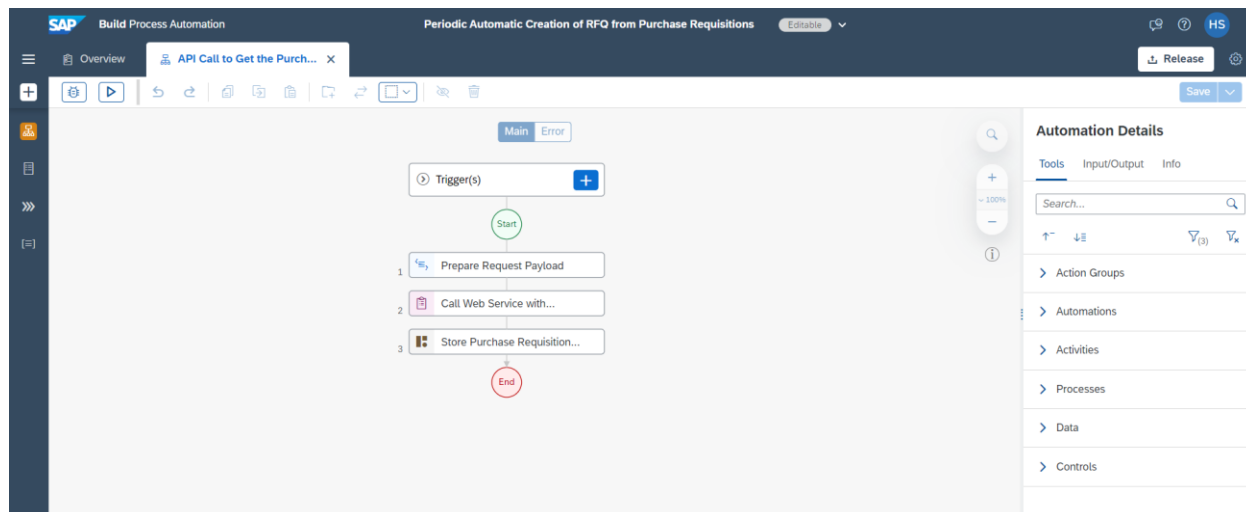
Note: - This package is built for attended Automation Scenario which will be scheduled at specific time and perform all the steps required to Create Request for Quotation from Purchase Requisitions

Note: RFQ here means Request for Quotation. PR means Purchase Requisitions.

Automations

API Call to Get the Purchase Requisition

This automation is used to get the purchase requisition from S4 System based on the days provided by user.



Step 1: Prepare the filter URL based on the filter criteria.

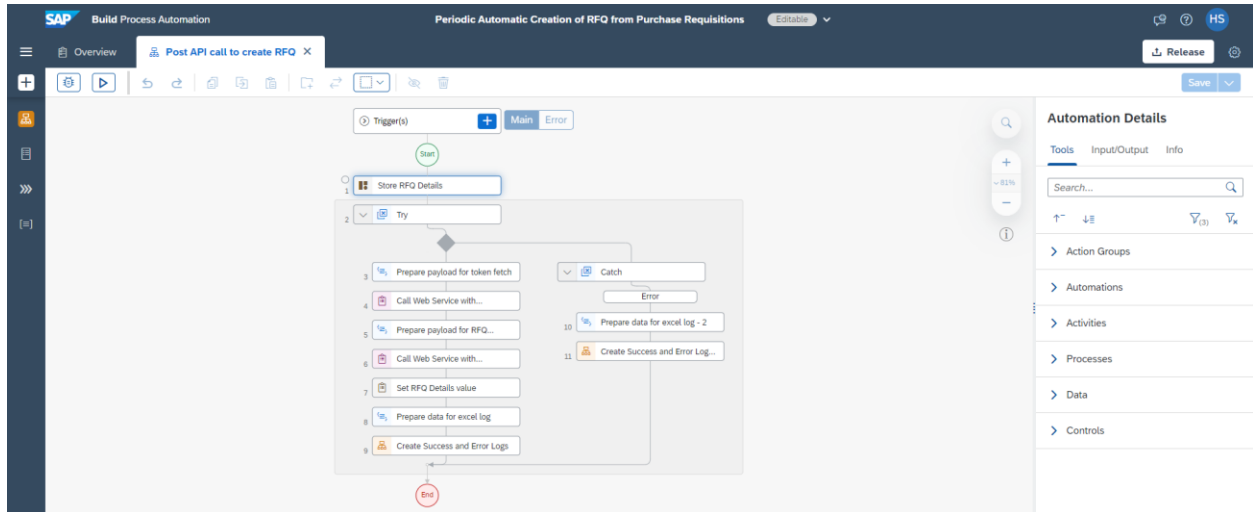
Note: To GET Purchase Requisition Automation will generate the Payload with the required inputs for Post call:

API Attributes	Values
Path	/sap/opu/odata4/sap/api_purchaserequisition_2/srvd_a2x/sap/purchaserequisition/0001/PurchaseReqnItem?\$filter=_PurReqn/PurchaseRequisitionType eq 'NB' and (PurReqnReleaseStatus eq '02' or PurReqnReleaseStatus eq '05') and PurchasingOrganization ne '' and PurchasingGroup ne '' and Plant ne '' and PurchaseContract eq '' and FixedSupplier eq '' and PurchasingInfoRecord eq '' and IsDeleted eq false and ProcessingStatus eq 'N' and DeliveryDate ge '' + currentDateTime + filterCriteria + "&\$select=PurchaseRequisition,PurchaseRequisitionItem,CompanyCode,PurchasingOrganization,PurchasingGroup,PurReqnItemCurrency,DeliveryDate,CreatedByUser,ItemNetAmount,PurchasingDocumentItemCategory,Plant,PurchaseRequisitionItemText,Material,MaterialGroup,RequestedQuantity,BaseUnit,Supplier
HTTP Method	GET
Payload sent	NA

Response	Success (Status = 200): OK
Payload Type	Application/JSON

Post API call to create Request for Quotation

This automation is used to create the Request for Quotation



Step 3: Prepare payload to fetch the token.

Step 5: Prepare payload for Request for Quotation creation.

Step 8: Prepare data for excel log.

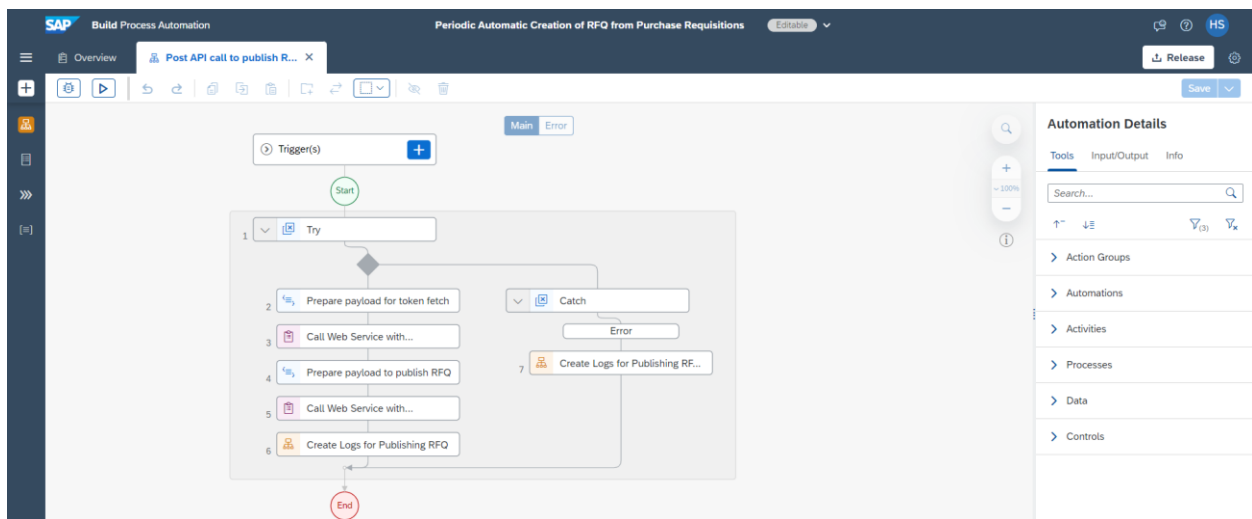
Step 10: Prepare data for excel error log.

API Attributes	Values
Path	/sap/opu/odata4/sap/api_requestforquotation_2/srvd_a2x/sap/requestforquotation/0001/RequestForQuotations
HTTP Method	POST
Payload sent	<pre>{ "_RequestForQuotationBidder": [{ "RequestForQuotation": "", "Supplier": "10105" }], "_RequestForQuotationItem": [{ "RequestForQuotationItem": "10", "RequestForQuotation": "", "Material": "", "PurchasingDocumentItemText": "Joiner Kit", "MaterialGroup": "301", "Plant": "4101", </pre>

	<pre> "ScheduleLineDeliveryDate": "2023-08-07", "ScheduleLineOrderQuantity": 1, "OrderQuantityUnit": "EA", "PurchaseRequisition": "10275133", "PurchaseRequisitionItem": "10" }], "RequestForQuotation": "", "CompanyCode": "4001", "PurchasingDocumentType": "RE", "PurchasingOrganization": "4100", "PurchasingGroup": "410", "DocumentCurrency": "USD", "QuotationLatestSubmissionDate": "2023-08-07", "RequestForQuotationName": "REQUEST FOR QUOTATION Name" } </pre>
Response	Success (Status = 200): OK
Payload Type	Application/JSON

Post API call to publish Request for Quotation

This automation is used to publish the created Request for Quotation



Step 2: Prepare payload to fetch the token.

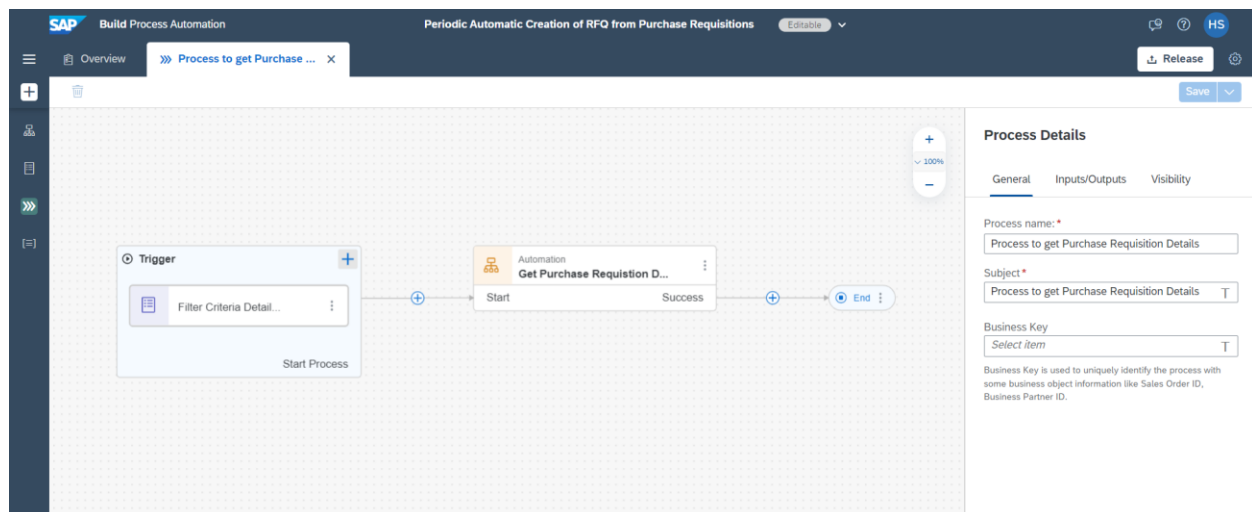
Step 4: Prepare payload to publish Request for Quotation

API Attributes	Values
Path	/sap/opu/odata4/sap/api_requestforquotation_2/srvd_a2x/sap/requestforquotation/0001/RequestForQuotation(%277000000221%27)/SAP__self.SubmitRFQForApproval
HTTP Method	POST
Payload sent	N/A
Response	Success (Status = 200): OK
Payload Type	Application/JSON

Process

Process to get Purchase Requisition Details

This process is used to get the inputs via form and trigger the Get Purchase Requisition Details Automation



Form

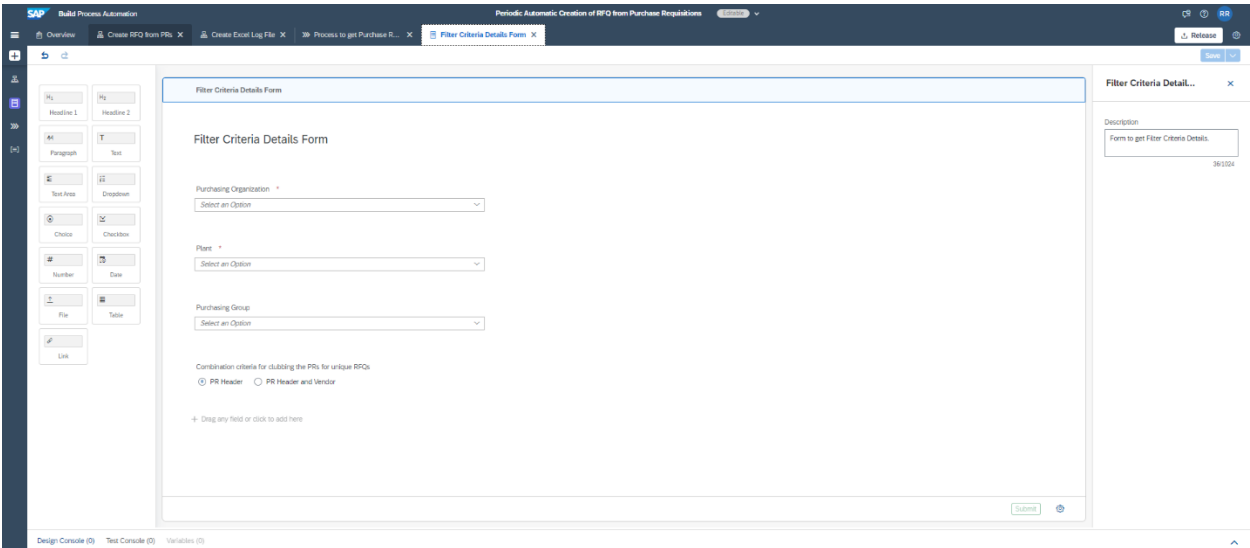
Filter Criteria Details Form

This template contains form to get the inputs from the user.

(Optional Step) - You can update or extend the forms based on your requirements.

To edit the form:

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



Action Projects

We used action project for value helps.

	Purchasing Group Actions Fetch Purchasing Group details from Purchasing Group API.	2 Available Latest: 1.0.1	Actions
	Purchasing Organization Actions Fetch Purchasing Organization details from the Purchasing Organization API.	1 Available Latest: 1.0.0	Actions
	Plant Actions Fetch Plant details from Plant API.	1 Available Latest: 1.0.0	Actions

Action Projects	URL
-----------------	-----

Purchasing Group	/sap/opu/odata4/sap/api_purchasinggroup/srvd_a2x/sap/purchasinggroup/0001/A_PurchasingGroup
Plant	/sap/opu/odata/sap/ZZ1_PLANT_VH_CDS/ZZ1_Plant_VH
Purchasing Organization	/sap/opu/odata4/sap/api_purchasingorganization/srvd_a2x/sap/purchasingorganization/0001/A_PurchasingOrganization

Key Parameters used in the Automation:

The following environment variables must be configured in the project.

AdminEmailId: Provide the email id of admin who will receive an email if the “Target User Email Id” field is missing in updated excel.

S4_Destination: Provide the destination which is being setup in BTP subaccount to connect to S4 System

PRListFolderPath: Provide the path where we need to put the excel in which all the fetched Purchase Requisitions details are maintained.

UpdatedFileFolderPath: Provide the path where we need to place the updated Purchase Requisition Excel for the Request for Quotation creation.

S4_Destination:

Select a destination

AdminEmailId:

PRListFolderPath:

UpdatedFileFolderPath:

Output generated by the automation:

The automation generates the log in the form of an excel file. The format is shown in the screen capture below

	A	B	C	D	E	F	G
1	RFQ Document No	Purchase Requisition	Purchase Requisition Item	Material	Supplier Number	RFQ Published	
2	7000000308	10275181, 10275181	10, 20	MSCDEM2, MSCDEM2	10003, 10005	Published Successfully.	
3							
4							
5							
6							

Support

There is no support available for 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 business rules 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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