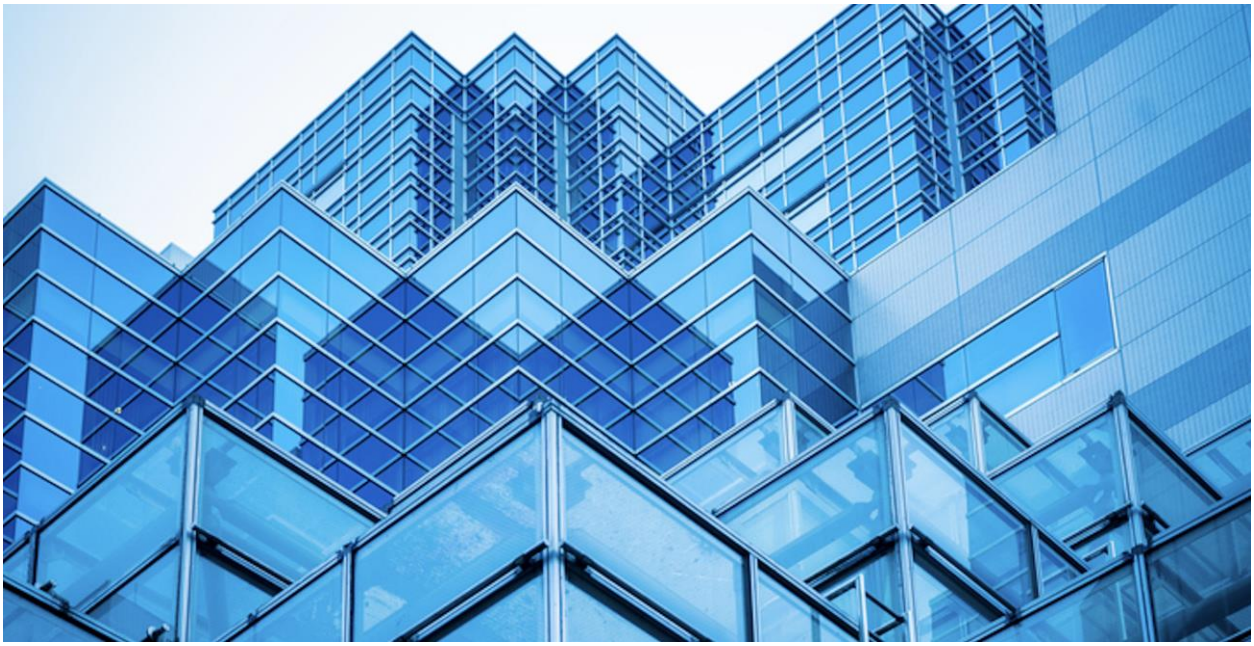


PUBLIC

SAP Build Process Automation

Automatic Supplier Invoice Status Check Template

Configuration and User Guide

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CHANGE LOG

Version	Date	Description
1.0.0	August 10 2023	Document Created

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OVERVIEW

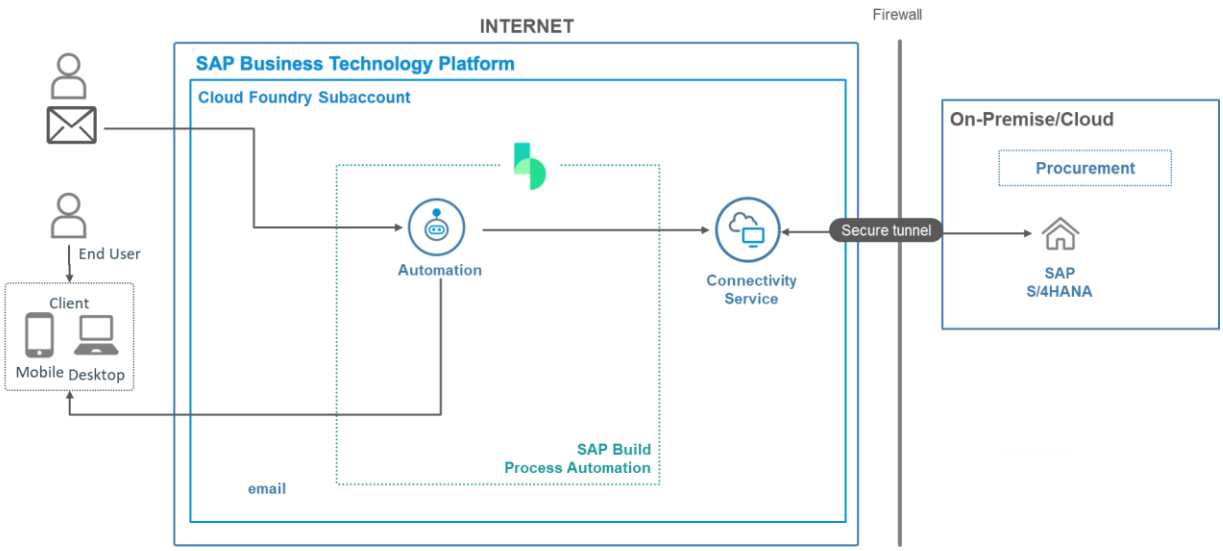
This document provides information about setting up the SAP Business Technology Platform account to consume the SAP Build Process Automation **Automatic Supplier Invoice Status Check Template.** The main audience of this document are technical IT/system administrators.

Automation facilitates to check the supplier invoice status.

Features

- The Automation must be able to automatically search the email based on the subject provided
- The Automation must be able to automatically download the attachment in the folder with the excel name provided
- The Automation must be able to automatically read every excel in the folder
- The Automation must be able to automatically fetch the invoice status and payment status for each invoice from SAP S/4HANA Cloud or SAP S/4HANA On-Premise and generate the response excel in the same folder
- The Automation must be able to automatically able to send each response excel created as separate mail

Supplier Invoice Check



Runtime Steps:

1. BOT reads the incoming email with Supplier Information. The sender must have a common excel template including excel name, sheet name and column names which will be sent to buyer email address to get invoice status. So this will work if above mentioned condition is satisfied.
2. Validate if Supplier Information to make sure request is authorized.
3. Validate Input file information.
4. Read input file record.

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PREREQUISITES

The following SAP Business Technology Platform services are required to consume the content package Manage Supplier Invoice Status Check:

- 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

Automatic Supplier Invoice Status Check 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

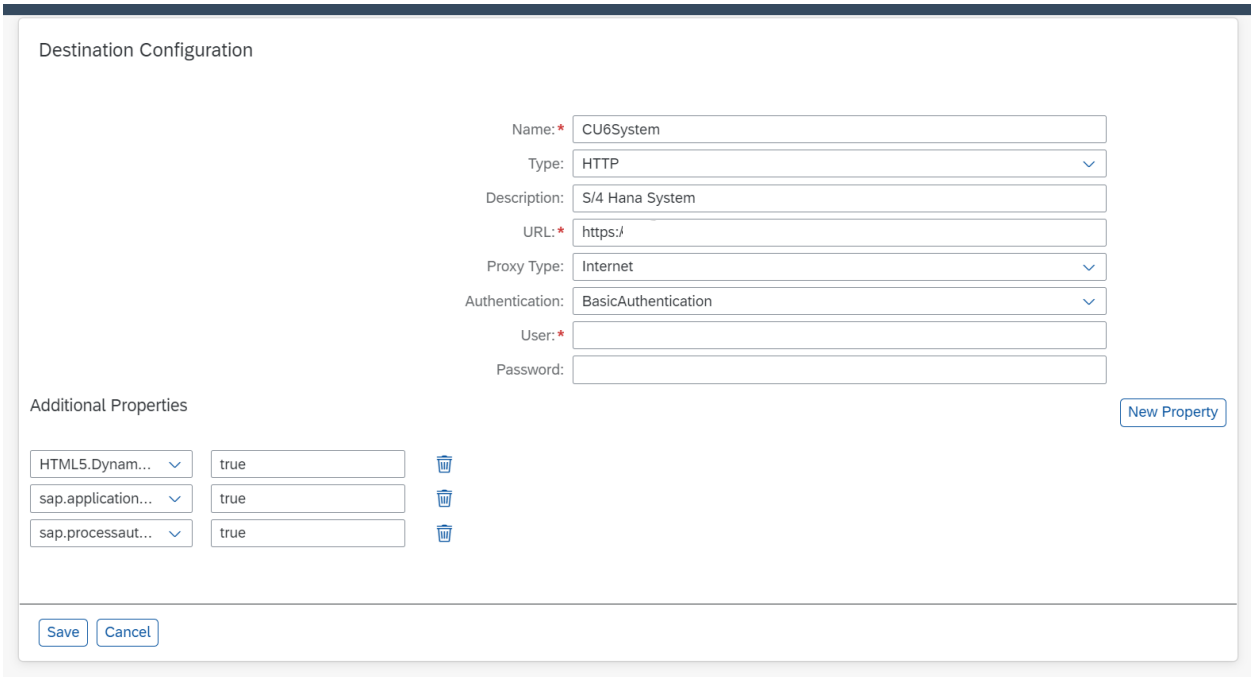
Destination Property	Value
Name	<Name>
Type	HTTP
URL	<URL>
Proxy Type	Internet
Authentication	<Authentication Type>

Note: 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.

Note: Add configurations for the authentication type chosen

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

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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

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How to Create a Communication Arrangement | SAP Help Portal

Communication Scenario	Related API
Supplier Invoice Integration(SAP_COM_0057)	https://api.sap.com/api/API_SUPPLIERINVOICE_PROCESS_SRV/overview
Finance - Accounting Analytics Integration(SAP_COM_0303)	https://api.sap.com/api/API_OPLACCTGDOCITEMCUBE_SRV/overview
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

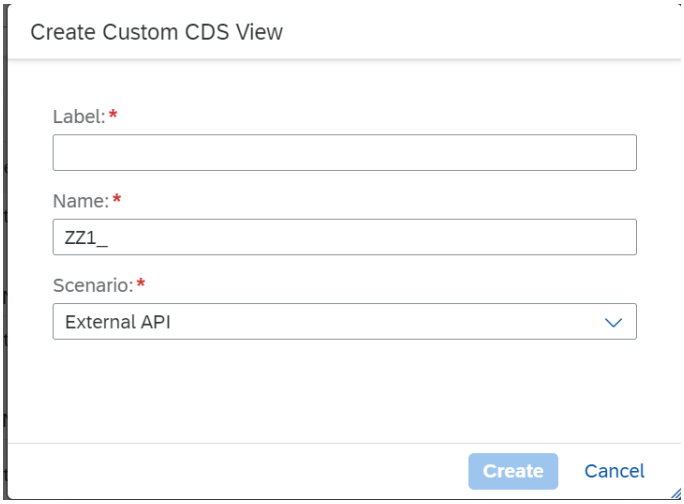
1. Open the **Custom CDS Views** app.



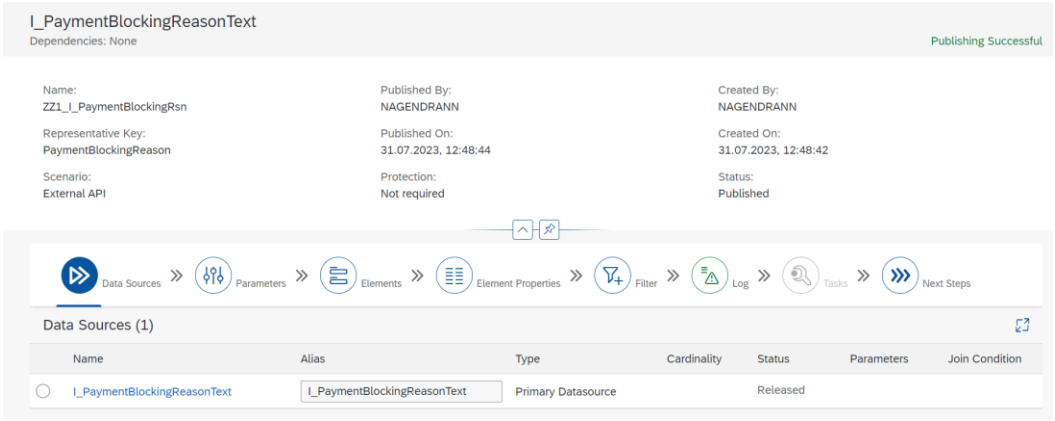
2. Click **Create** and select the scenario **External API**.

   Name - **ZZ1 _I_PaymentBlockingRsn**

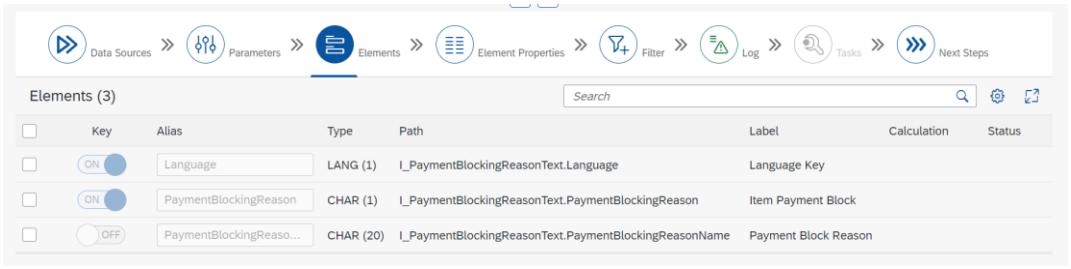
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3. Select your **Primary Data Source – I_PaymentBlockingReasonText**



4. Go To Elements Tab and add **Elements** – Language, PaymentBlockingReason, PaymentBlockingReasonName



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5. **Check** and **Publish**

6. Open the **Communication Scenarios** app and create a new communication scenario.

   (We have referred to -Create an Additional Communication Scenario | SAP Help Portal)

7. Add the inbound services *CustomCDSViewNAme*_CDS to the communication scenario and publish it:

   - **ZZ1_ I_PaymentBlockingRsn _CDS**

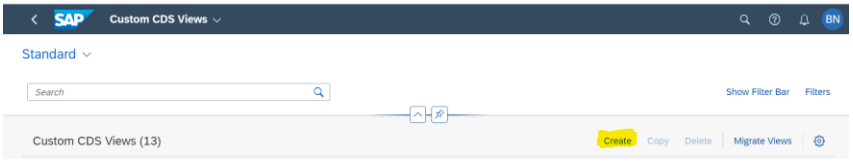
8. Open the **Communication Arrangements** app and create a communication arrangement based on this newly created custom communication scenario.

9. In the **Communication System** field under **Common Data**, select the communication system that you have created following the **Create Communication System** step mentioned in Set Up Communication.

10. Save your entries.

---

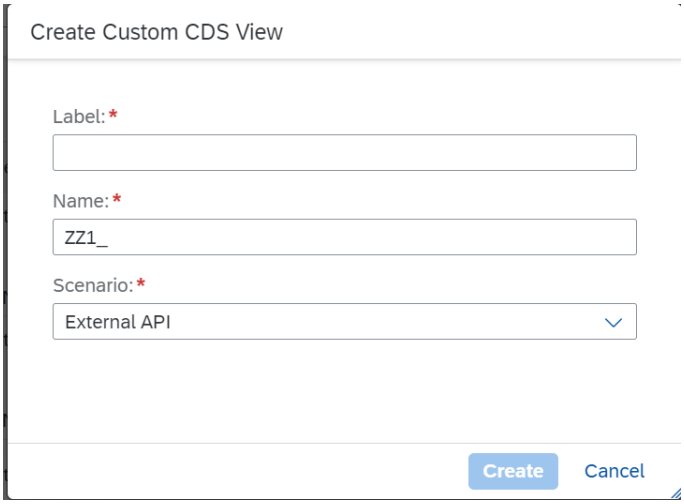
1. Open the **Custom CDS Views** app.



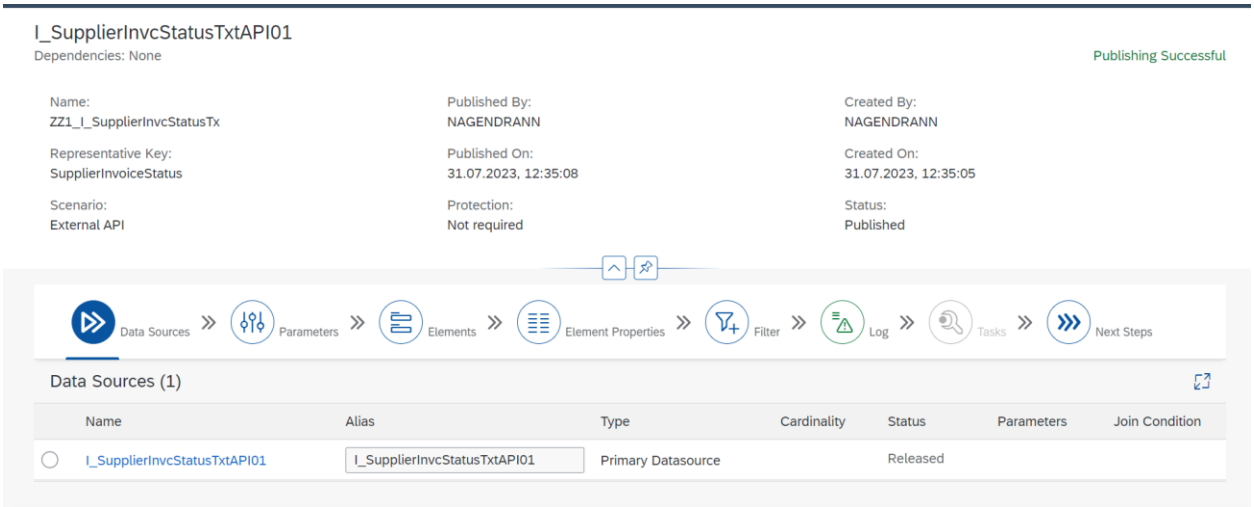
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2. Click **Create** and select the scenario **External API**.

   Name - **ZZ1 _ I_SupplierInvcStatusTxtAPI01**

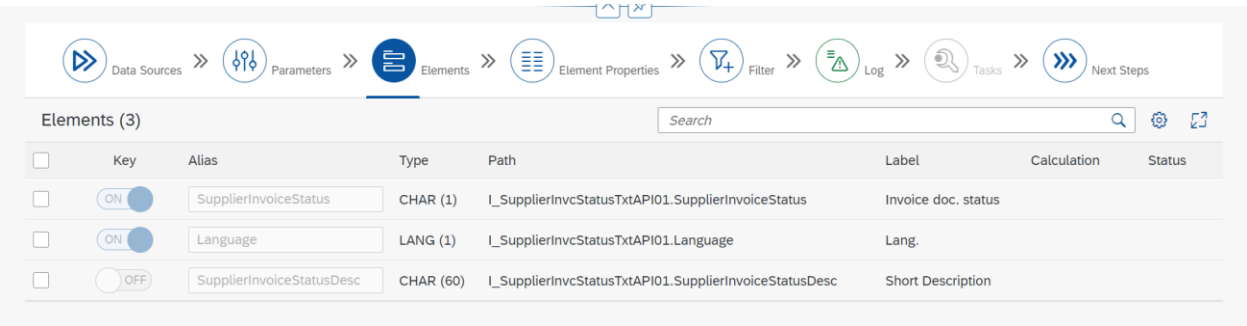


3. Select your **Primary Data Source – I_SupplierInvcStatusTxtAPI01**



4. Go To Elements Tab and add **Elements**

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5. **Check** and **Publish**
6. Open the **Communication Scenarios** app and create a new communication scenario.

   (We have referred to -Create an Additional Communication Scenario | SAP Help Portal)

7. Add the inbound services *CustomCDSViewNAme*_CDS to the communication scenario and publish it:

   - **ZZ1_ I_SupplierInvcStatusTxtAPI01 _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 in Set Up Communication.

10. 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 “**Automatic Supplier Invoice Status Check**”
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 “Automatic Supplier Invoice Status Check” template available for use.

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Configure Automation

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 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.

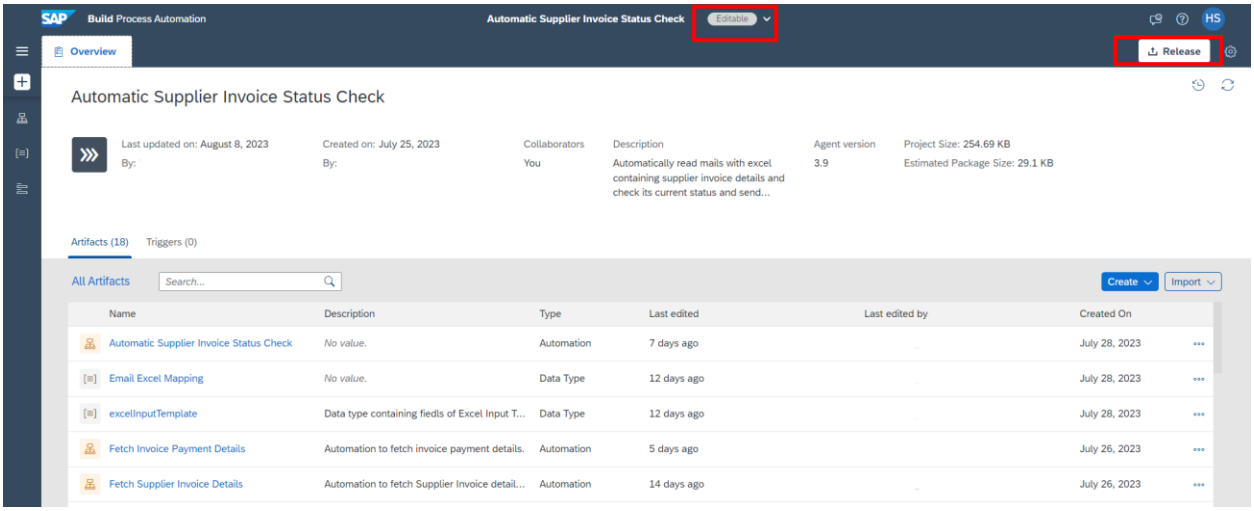
Release - This locks the version of your process, meaning that no further edits can be made to that version. At this stage, the process can't be run and isn't available to participants yet.

To release a version of your process,

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

Then click 'Release'

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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.

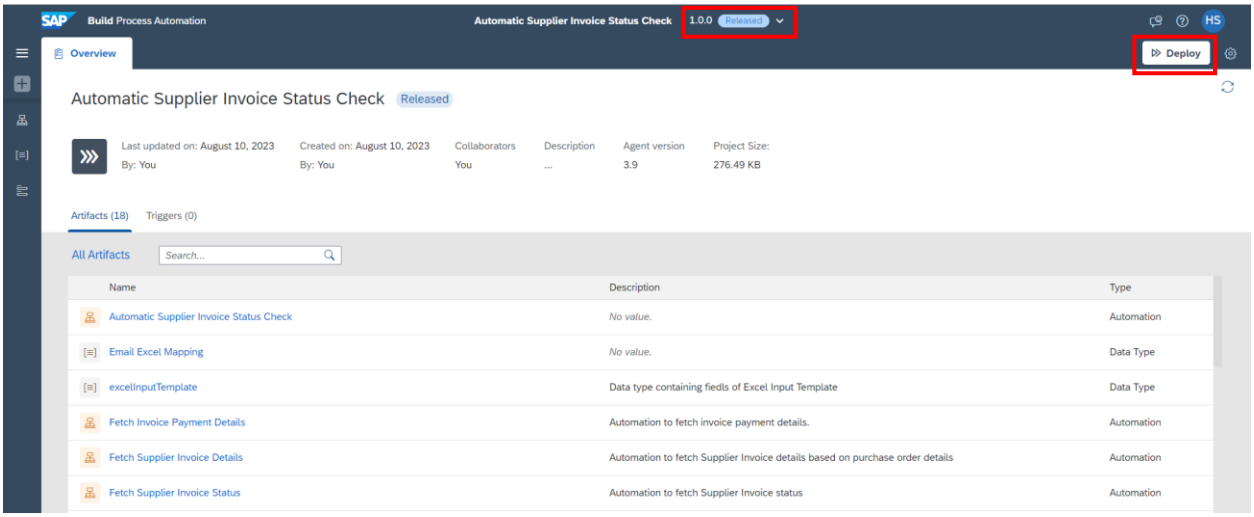
Deploy – This takes a released version of a process and enables it to be actively run and monitored. A deployed version of this approval process unlocks the request form, allowing participants to submit requests and the approvers to view items in their inbox.

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

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– For more details about the Destination artefact, please read our documentation.

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USER GUIDE

Capabilities

Icon	Type	Name	Description
	Automation	Automatic Supplier Invoice Status Check	Automatic Supplier Invoice Status Check
	Automation	Fetch Invoice Payment Details	Automation to Fetch invoice payment details.
	Automation	Fetch Supplier Invoice Details	Automation to Fetch Supplier Invoice details based on purchase order details
	Automation	Fetch Supplier Invoice Status	Automation to Fetch Supplier Invoice status
	Automation	Fetch Supplier Number	Automation to Fetch Supplier Number
	Automation	Process Excel Information	Read Excel and provide the response
	Automation	Respond To Supplier	Send the response to supplier
	Automation	Retrieve Supplier Invoice Status and Payment Status	Automation to Retrieve Supplier Invoice Status and Payment Status
	Automation	Scheduled Supplier Invoice Status Check	
	Automation	Search in Outlook	Search for the attachment in mail with subject as filter
	Automation	Validate Supplier	Validate the supplier
	Data type	Email Excel Mapping	
	Data type	excelInputTemplate	Data type containing fiedls of Excel Input Template
	Data type	invoicePaymentStatusResponse	Data type containing fields for invoice payment status response
	Data type	retrieveSupplierInvoiceRequest	Data type containing fields for retrieve supplier invoice request details
	Data type	retrieveSupplierInvoiceResponse	Data type containing fields for retrieve supplier invoice response details

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[≡]	Data type	supplierInvoiceStatusResponse	Data type with fields containing supplier invoice status response.

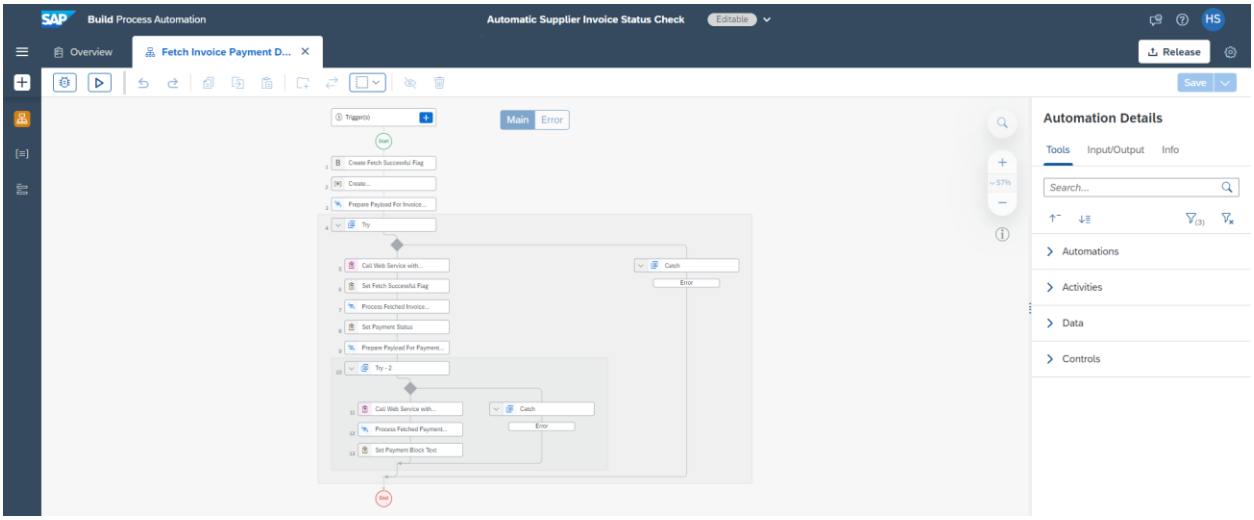
This content package will enable SAP ERP customers to automate the Supplier Invoice Status Check in SAP S/4HANA System. The purpose of this technical specification is to outline the process and requirements for Supplier Invoice Status Check. This specification also includes the necessary table and field mappings within SAP, as well as the latest API to be used for checking the Supplier Invoice Status.

Note: - This package is built for attended Automation Scenario which will be scheduled at specific time and perform all the steps required to Check the Supplier Invoice Status.

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Automations

Fetch Invoice Payment Details



Step 3: Prepare Payload For Invoice Payment Status

Step 7: Process Fetched Invoice Payment Status

API Attributes	Values
Path – Invoice Status	/sap/opu/odata/sap/API_OPLACCTGDOCITEMCUBE_SRV/A_OperationalAcctgDocItemCube?$filter=startswith(OriginalReferenceDocument,'" + supplierInvoiceNumber + "') and PurchasingDocument eq '" + purchaseOrderNumber + "' and PurchasingDocumentItem eq '" + purchaseOrderItemNumber + "'&$select=IsCleared,NetDueDate,PaymentBlockingReason,ClearingDate,DocumentReferenceID&$format=json
HTTP Method	GET
Payload sent	NA
Response	Success (Status = 200): OK
Payload Type	Application/JSON

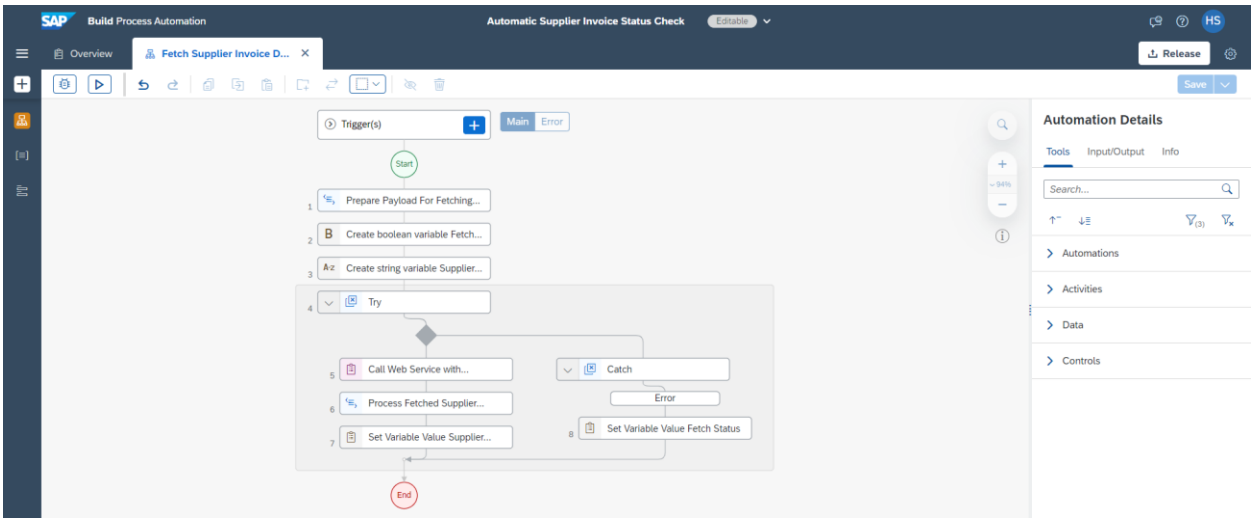
Step 9: Prepare Payload For Payment Block Text Fetch

Step 12: Process Fetched Payment Block Text

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API Attributes	Values
Path	/sap/opu/odata/sap/API_OPLACCTGDOCITEMCUBE_SRV/A_OperationalAcctgDocItemCube?$filter=startswith(OriginalReferenceDocument,'" + supplierInvoiceNumber + "') and PurchasingDocument eq '" + purchaseOrderNumber + "' and PurchasingDocumentItem eq '" + purchaseOrderItemNumber + "'&$select=IsCleared,NetDueDate,PaymentBlockingReason,ClearingDate,DocumentReferenceID&$format=json
HTTP Method	GET
Payload sent	NA
Response	Success (Status = 200): OK
Payload Type	Application/JSON

Fetch Supplier Invoice Details



Step 1: Prepare Payload for Fetching Supplier Invoice Details

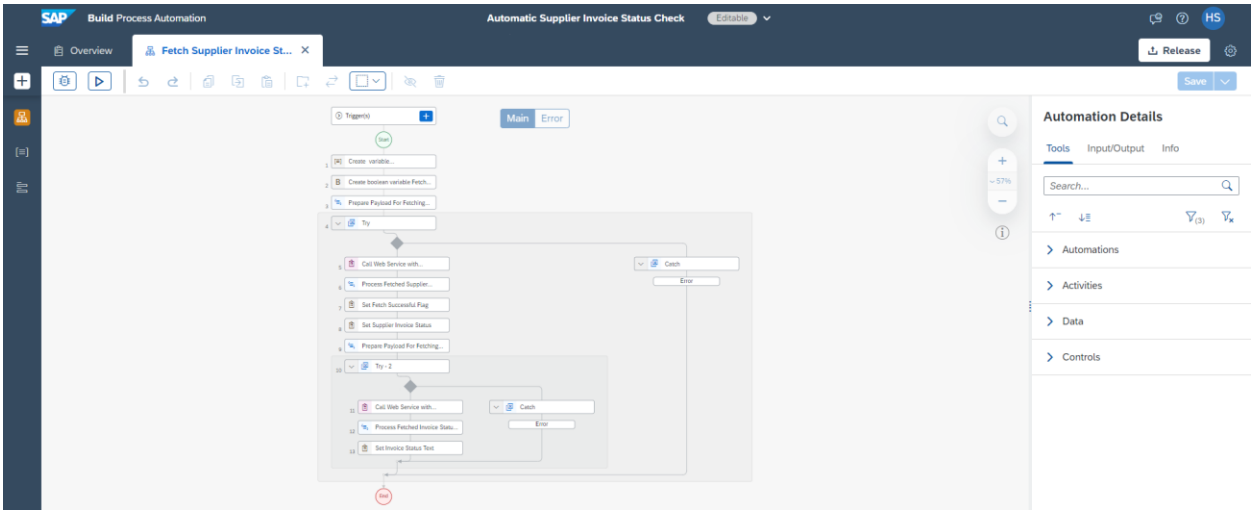
Step 6: Process Fetched Supplier Invoice Details

API Attributes	Values
Path	/sap/opu/odata/sap/API_SUPPLIERINVOICE_PROCESS_SRV/A_SuplrInvcItemPurOrdRef?$filter=PurchaseOrder eq '" + purchaseOrderNumber + "' and PurchaseOrderItem eq '" + purchaseOrderItemNumber + "'&$select=SupplierInvoice&$format=json

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HTTP Method	GET
Payload sent	NA
Response	Success (Status = 200): OK
Payload Type	Application/JSON

Fetch Supplier Invoice Status



Step 3: Prepare Payload For Fetching Supplier Invoice Status

Step 6: Process Fetched Supplier Invoice Status

API Attributes	Values
Path	/sap/opu/odata/sap/API_SUPPLIERINVOICE_PROCESS_SRV/A_SupplierInvoice?$filter=SupplierInvoice eq ''' + supplierInvoiceNumber + ''' and InvoicingParty eq ''' + supplierNumber + '''&$select= SupplierInvoiceStatus,PaymentBlockingReason,DocumentDate,InvoiceGrossAmount,DocumentCurrency&$format=json
HTTP Method	GET
Payload sent	NA
Response	Success (Status = 200): OK
Payload Type	Application/JSON

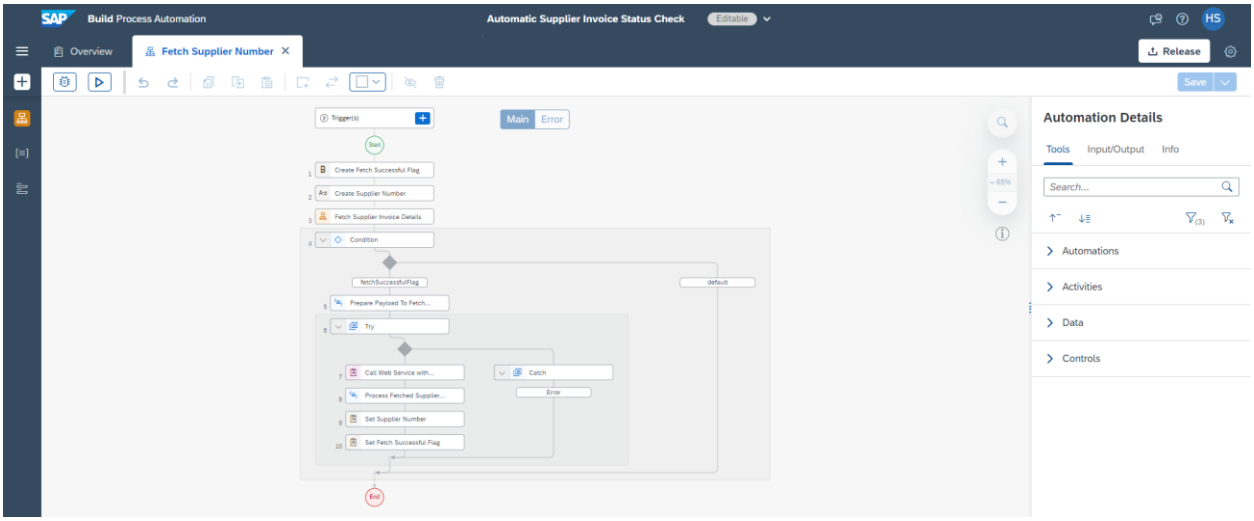
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Step 9: Prepare Payload For Fetching Invoice Status Text

Step 12: Process Fetched Invoice Status Text

API Attributes	Values
Path	/sap/opu/odata/sap/ZZ1_I_SUPPLIERINVCSTATUSTX_CDS/ZZ1_I_SupplierInvcStatusTx(SupplierInvoiceStatus='" + invoiceStatus + "',Language='EN')?$select=SupplierInvoiceStatusDesc&$format=json
HTTP Method	GET
Payload sent	NA
Response	Success (Status = 200): OK
Payload Type	Application/JSON

Fetch Supplier Number



Step 5: Prepare Payload to Fetch Supplier Number

Step 8: Process Fetched Supplier Number

API Attributes	Values
Path	/sap/opu/odata/sap/API_SUPPLIERINVOICE_PROCESS_SRV/A_SupplierInvoice?$filter=SupplierInvoice eq '" + supplierInvoiceNumber + "'&$select=InvoicingParty&$format=json

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HTTP Method	GET
Payload sent	NA
Response	Success (Status = 200): OK
Payload Type	Application/JSON

Key Parameters used in the Automation:

emailSubject: Search the email in outlook based on the subject provided here.

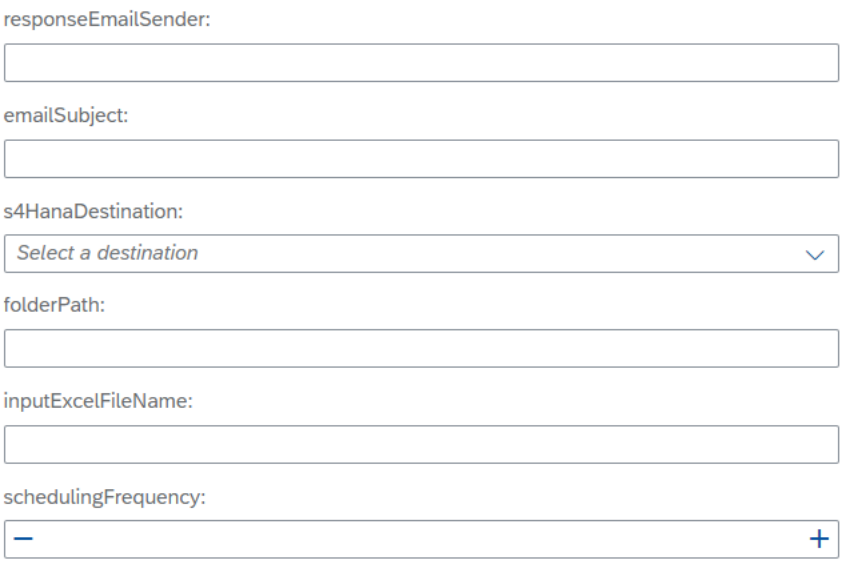
folderPath: The path where the input and output excel file will be placed.

inputExcelFileName: Provide the file name which we want to search that file in the email.

responseEmailSender: Provide the email address from whose inbox response must be sent.

s4HanaDestination: Provide the destination which is being setup in BTP subaccount to connect to S4 System

schedulingFrequency: provide the scheduling frequency for the scheduled bot.



Output

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	Return Message	Supplier Invoice	PO Number	PO Item Number	Invoice Date	Supplier	Reference	Invoice Amount	Currency	Payment Due Date	Invoice Status	Payment Status	Date Paid
2	Supplier Invoice Status Fetch Unsuccessful	5105603888				10100							
3	Supplier Validation Unsuccessful	5105603510				10102							
4	Supplier Invoice Status Fetch Unsuccessful	5105603999				10100							
5	Supplier Validation Unsuccessful	5105603508				10101							
6													
7													

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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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