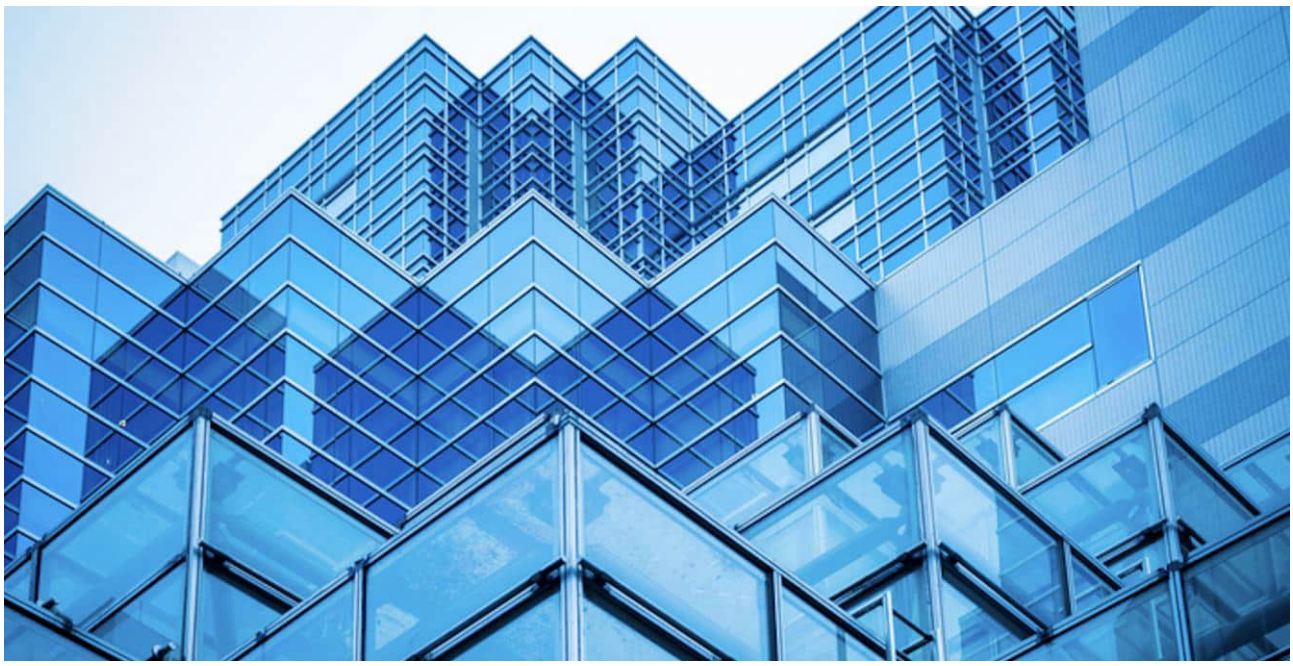


PUBLIC

SAP Build Process Automation Template

Manage Invoices without Purchase Order

Configuration & User Guide

Contents

Change Log 3
Overview 4
Prerequisites 6
Configuration Guide 7
Setup SAP Business Technology Platform Cockpit 7
Destination Configuration 7
Configure Cloud Connector 8
User Roles Configuration 10
Setup Integration Content 10
Setup SAP Build Process Automation Content 12
Import Content 12
Configuration & Modification 12
Configure Process 12
Configure Forms (Optional) 12
Configure Decisions 13
Configure Email 14
Configure Conditions & Branching (Optional) 16
Configure Process Visibility (Optional) 17
Release and Deploy Process 18
Configure SAP Work Zone 19
SAP Business Application Studio for SAP UI5 Application 20
User Guide 22
Decisions 26
Email Notifications 29
Automations 29
Process Visibility Scenario 31
Trigger Process 32
Dependencies 36
Technical Dependencies 36
Support 37

THE BEST RUN SAP®

Change Log

Version	Date	Description
1.0.0	June 30th, 2023	Document created

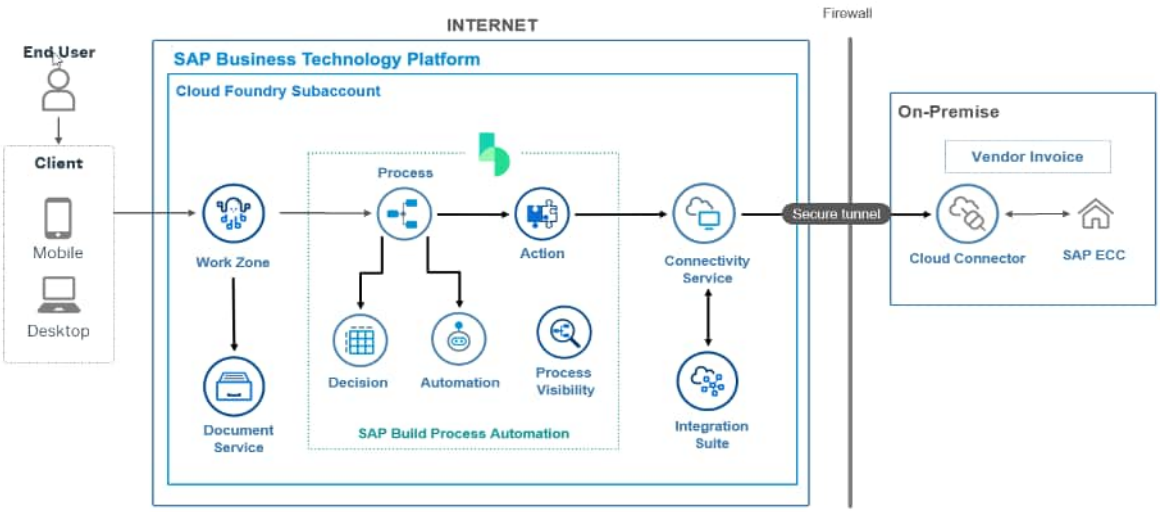
© 2023 SAP SE or an SAP affiliate company. All rights reserved. See Legal Notice on www.sap.com/legal-notice for use terms, disclaimers, disclosures, or restrictions related to SAP Materials for general audiences.

Overview

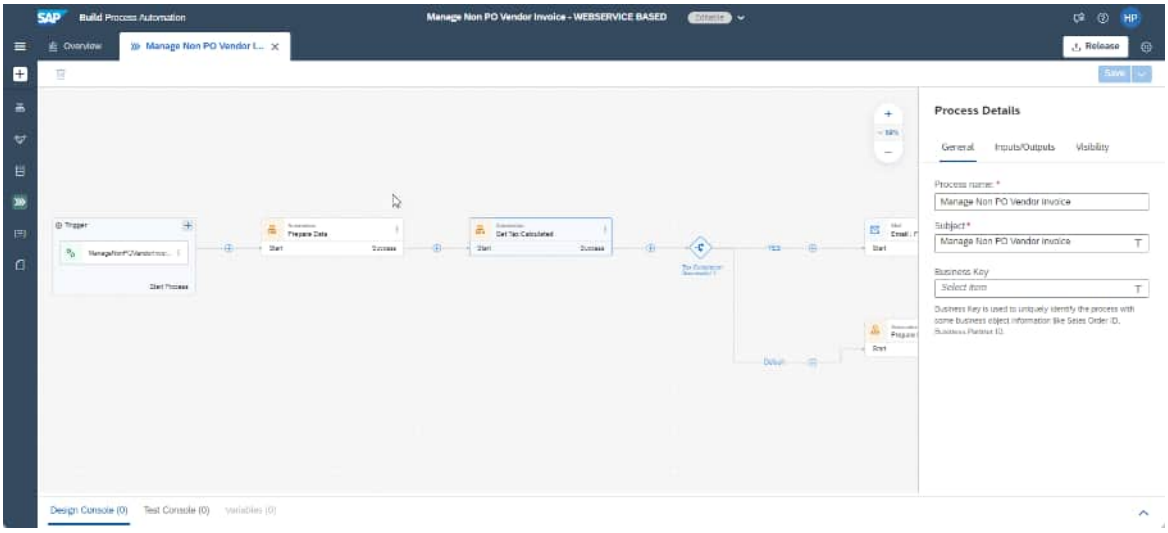
The Manage Invoices without Purchase template enables SAP ERP customers to automate the creation of Non PO Vendor Invoice in a transparent approach and provide flexibility to meet business requirements. It includes processes, decisions, automation, and visibility scenario content.

This template contains API trigger that triggers the process with required invoice details that is submitted from SAP UI5 application form. Provide SAP UI5 application also allows user to check & display any existing invoice. For creation and change of the invoice, customers can enable approval process before updating in SAP ERP

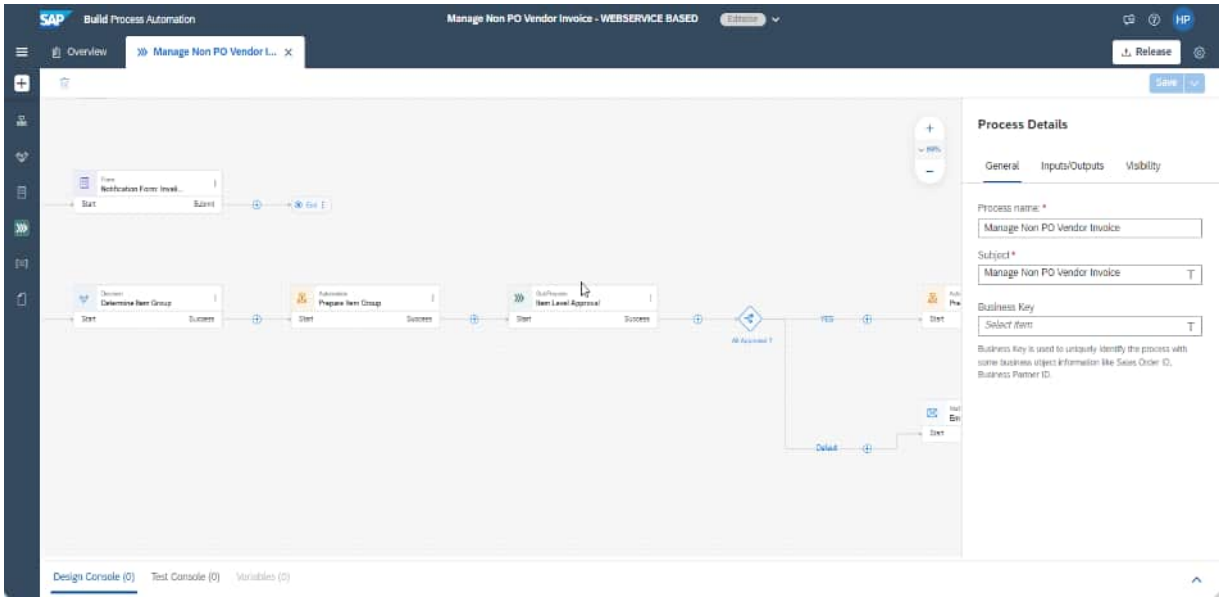
Following is the flow diagram how process & SAP system interacts with the support of other integration tools & artifacts:

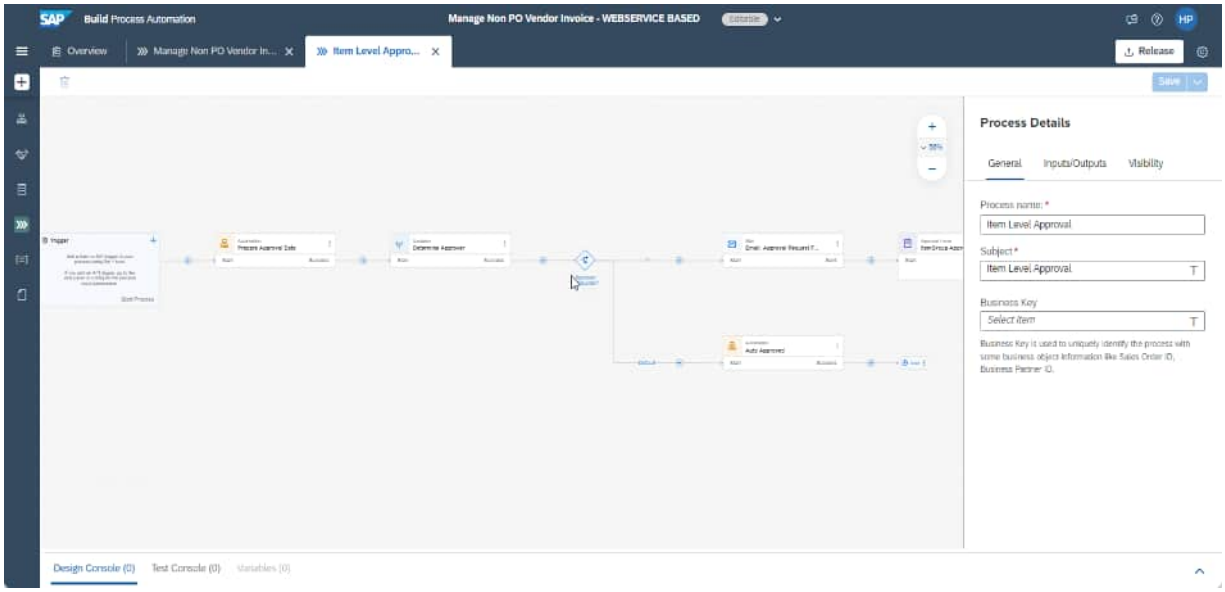


Followings are some snippets from the processes:



© 2023 SAP SE or an SAP affiliate company. All rights reserved. See Legal Notice on www.sap.com/legal-notice for use terms, disclaimers, disclosures, or restrictions related to SAP Materials for general audiences.





The followings are brief overview about the process execution:

- Business user (Requester) enters the required Invoice details including header details, items details, attachment & comments in SAP UI5 form & save the request that triggers the deployed process in SAP build process automation tenant.
- Provided invoice data is used for tax calculation & then it's validated through ERP system.
- Invoice data can be further be validated with decisions that provide easy & flexible use of business validation.
- On validation failure requester is notified with the appropriate message via email.
- Approver(s) & watcher(s) are notified via email about the request. Decision is defined for grouping of invoice item details & for delegation of approval request to the responsible approvers.
- Approver(s) accesses My Inbox to view the task, review the responsible item details, attachment (if provided) and choose one of the following decisions:
  - Approve: Upon selecting "Approve" option, process captures the approval status & moves for another approval if already defined in the process.

© 2023 SAP SE or an SAP affiliate company. All rights reserved. See Legal Notice on www.sap.com/legal-notice for use terms, disclaimers, disclosures, or restrictions related to SAP Materials for general audiences.

- Reject: Upon selecting ‘Reject’ option process ends the execution with appropriate notification to the requester & approver(s).

- On successful approval of the invoice request, invoice is posted to the ERP system followed by email notification to requester & approver(s)

Note:

- Currently the process template supports the approval of single item group due to the limitation of iterative feature (it will be available soon with the new release). Please refer the ‘Determine Item Group’ section for more details.

- Default Baseline Date: This package uses the invoice date as the baseline date & based on the requirement can be updated in automation “Prepare Invoice for Posting”

Prerequisites

The following SAP Business Technology Platform services are required to consume the content package Manage Invoices without Purchase Order:

- SAP Build Process Automation to orchestrate the process.
- SAP Work Zone, standard edition
- SAP Cloud Identity Services - Identity Authentication
- SAP Integration Suite to consume the RFC, BAPI from SAP ECC
- SAP Connectivity service (cloud connector) to establish access to SAP ECC (EBJ: EHP6 FOR SAP ERP 6.0) on-premises.
- SAP Business Technology Platform, Cloud Foundry runtime.
- SAP Business Application Studio for SAP UI5 application (Click Here)
- SAP Build Process Automation instance

© 2023 SAP SE or an SAP affiliate company. All rights reserved. See Legal Notice on www.sap.com/legal-notice for use terms, disclaimers, disclosures, or restrictions related to SAP Materials for general audiences.

Configuration Guide

The template requires SAP Build Process Automation subscription or CPEA contract. Follow the setup and configuration section.

Setup SAP Business Technology Platform Cockpit

Destination Configuration

- **Configure SAP Integration Suite Destination**

To call an integration flow, a HTTP destination is required in the SAP BTP account where the SAP Build Process Automation is subscribed.

Create a destination with name CPI with either Basic Authentication or OAuth2ClientCredentials.

Destination with Basic Authentication

Name	CPI
Type	HTTP
Proxy Type	Internet
Authentication	Basic Authentication
URL	<integration suite runtime URL>
Username	<Username>
Password	<Password>

Destination with OAuth2ClientCredentials

Name	CPI
Type	HTTP
Proxy Type	Internet
Authentication	OAuth2ClientCredentials
URL	<runtime URL>
Username	<Username>
Password	<Password>
Token Service URL	<oauth URL for client credentials>

Additional Properties to Destination

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

WebIDEEnabled	true

© 2023 SAP SE or an SAP affiliate company. All rights reserved. See Legal Notice on www.sap.com/legal-notice for use terms, disclaimers, disclosures, or restrictions related to SAP Materials for general audiences.

WebIDESystem	CPI
WebIDEUsage	odata_gen

- ## Configure SAP ECC Destination

  An RFC destination is required in the SAP BTP account where Integration capability within SAP Integration Suite is subscribed.

  Refer create a RFC destination to learn more.

  Note: The destination name need not be '*ECC'* as seen below. If a different name is used, then the same needs to be configured in the Integration Flow.

Name	ECC or <ANYNAME> Note: You can name it as you wish but maintain the destination name in the integration flow configuration.
Type	RFC
Proxy Type	On-Premise
User	<ECC USER>
Password	<ECC PASSWORD>
Repository User	
Repository Password	
Location ID	<optional>
Additional Property	Name: jco.client.ashost | Value: <abapServerHost> Name: jco.client.client | Value: <client id> Name: jco.client.sysnr | Value: <system Number>

- ## Configure SAP Build Process Automation Email Destination

  Configure SAP build process email destination. For more information on configuring destination, see **Configure a SMTP Mail Destination**

  For more information refer to Create HTTP Destinations and OAuth User Token Exchange Authentication.

Configure Cloud Connector

Configure your SAP BTP account and SAP ECC system in Cloud Connector to enable secure tunnel for RFC calls. Please refer the help documentation to configure Cloud Connector.

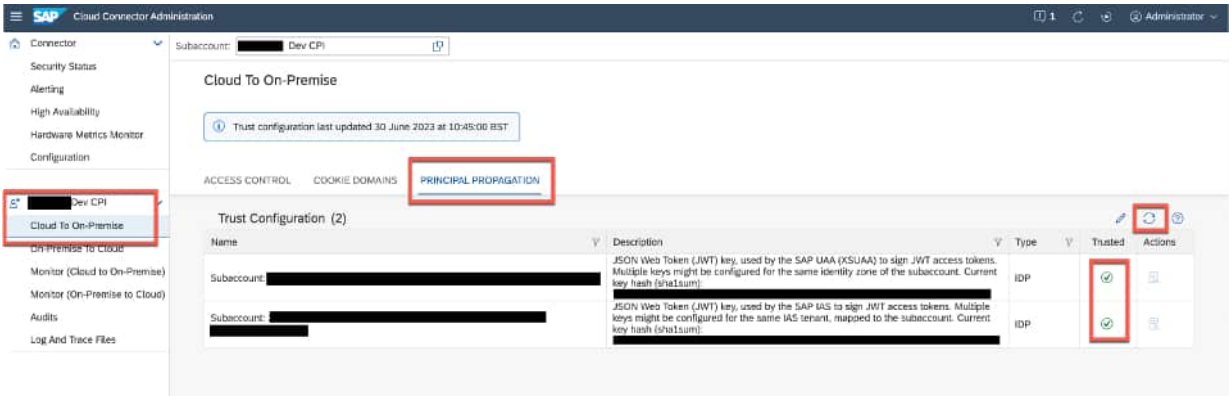
Following BAPIs in cloud connector needs to be exposed to be able to access the function modules:

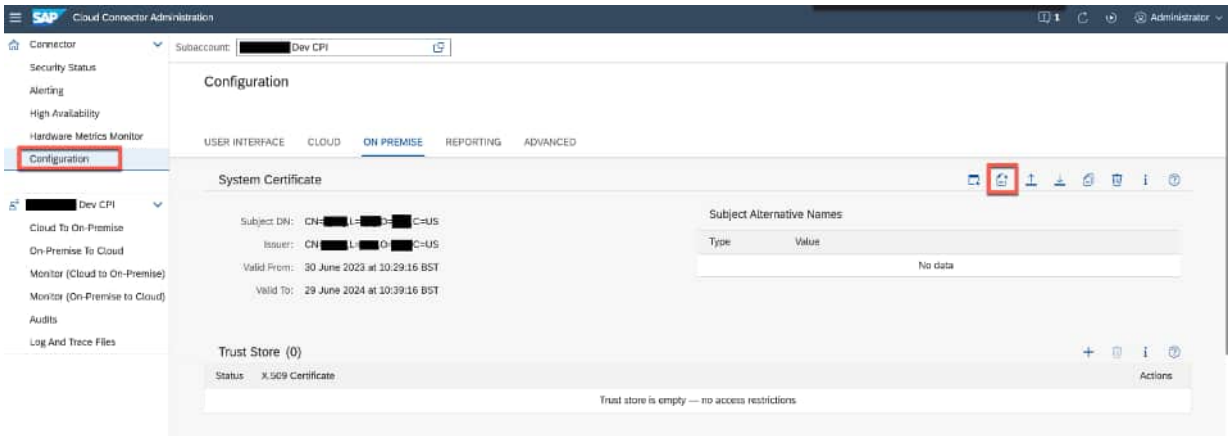
- BAPI_GL_ACC_GETLIST
- BAPI_COMPANYCODE_GETLIST
- MMPUR_UI_GET_SUPPLIERS
- BAPI_BUSINESSAREA_GETLIST

© 2023 SAP SE or an SAP affiliate company. All rights reserved. See Legal Notice on www.sap.com/legal-notice for use terms, disclaimers, disclosures, or restrictions related to SAP Materials for general audiences.

- BAPI_PROFITCENTER_GETLIST
- BAPI_COSTCENTER_GETLIST
- /SAPNEA/SMAPI_PLANT_GETLIST
- RFC_READ_TABLE
- BPAR_C_FI_TERM_OF_PAYMENT_KEY
- BAPI_CONTROLLINGAREA_FIND
- FI_TAX_SERVICES_CALCULATE
- BAPI_ACC_DOCUMENT_POST
- BAPI_ACC_DOCUMENT_CHECK
- BAPI_VENDOR_GETDETAIL
- BAPI_COMPANYCODE_GETDETAIL
- BAPI_USER_GETLIST
- BAPI_EXCHRATE_GETCURRENTRATES

For implementing principal propagation from the integration flow to the SAP ECC, synchronize the IDP in SAP cloud connector, create the destination of type IDP and import the self -signed CA certificates.





In SAP ECC, follow these steps to enable principal propagation:

1. Import Cloud Connector (SCC) System certificate in STRUSTSSO2 transaction under SSL Server Standard. This established the trust between the backend and SCC.
2. Maintain subject, issuer, cert rule parameter details in default profile – RZ10 transaction.
3. Create the rule-based mapping using sample X.509 certificate – CERTRULE transaction.
4. Restart ICM.

© 2023 SAP SE or an SAP affiliate company. All rights reserved. See Legal Notice on www.sap.com/legal-notice for use terms, disclaimers, disclosures, or restrictions related to SAP Materials for general audiences.

User Roles Configuration

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

Role Name	Purpose
ProcessAutomationDeveloper	To fully use this content package, you need to have an active user entitled to this role to use SAP Build Process Automation
Business_Application_Studio_Administrator	To fully use this content package, you need to have an active user entitled to this role to use Business Application Studio
Business_Application_Studio_Developer	To fully use this content package, you need to have an active user entitled to this role to use Business Application Studio
AuthGroup.IntegrationDeveloper	To fully use this content package, you need to have an active user entitled to this role to use Integration content package.
Business_Application_Studio_Extension_Deployer	To fully use this content package, you need to have an active user entitled to this role to use Business Application Studio

For more information about SAP Build Process Automation roles, see Authorizations

Note:

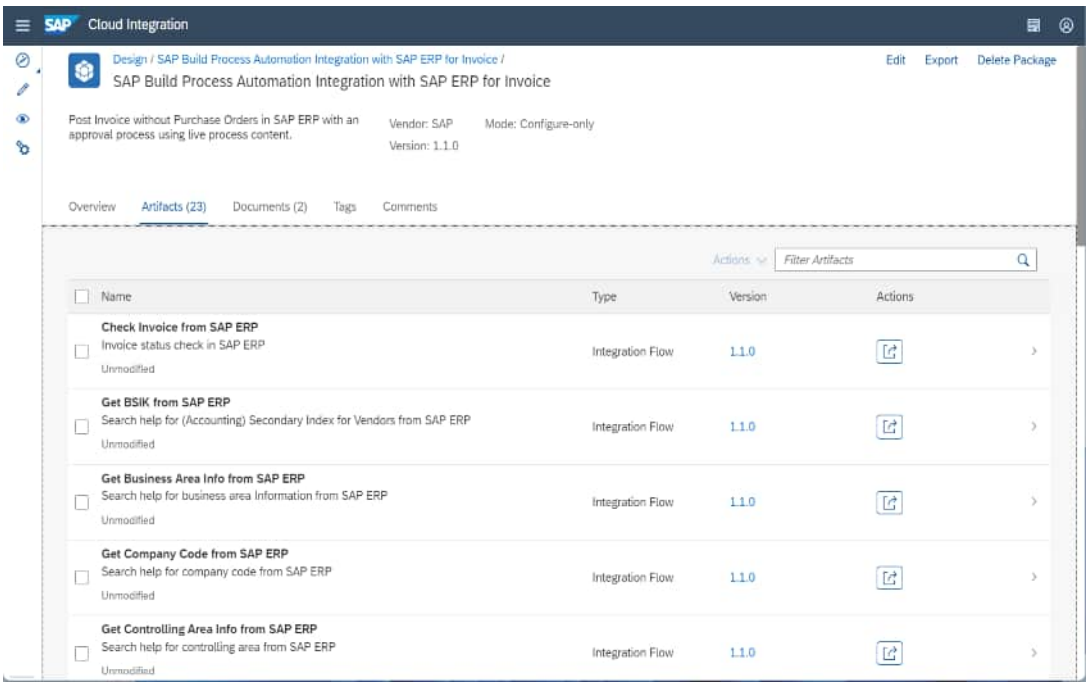
This template content is to accelerate your solution development. To use this template, you can modify it according to your requirement. This document provides with you enough information about the package's configurable features & setup information, but you need to have basic knowledge & understanding of SAP Build Process Automation & SAP Integration Suite & its capabilities to understand the functionalities of different package artefacts.

Setup Integration Content

This template requires Process Integration capability within SAP Integration Suite for invoice validation, tax calculation & posting of invoice to the ERP system. An integration content package **SAP Build Process Automation Integration with SAP ERP for Invoice** is available in SAP Business Accelerator Hub to integrate SAP Build Process Automation with SAP ECC.

All integration models use the RFC Adapter to call the required RFC/BAPI in SAP ECC. The following Integration models are available in this package.

© 2023 SAP SE or an SAP affiliate company. All rights reserved. See Legal Notice on www.sap.com/legal-notice for use terms, disclaimers, disclosures, or restrictions related to SAP Materials for general audiences.



Import the Content package to your SAP Integration Suite account. To be able to import and deploy integration flows, you need the AuthGroup.IntegrationDeveloper role assigned in your user.

Import Pre-packaged Integration Content in SAP Integration Suite:

- Access your SAP Integration Suite tenant management node (https://<cpitenant>. hana.ondemand.com/itspaces).
  - Refer help documentation on how to get tenant management node address
- View all pre-packaged integration flow under Discover → Integration (https: ://<cpitenant>. hana.ondemand.com/itspaces/shell/discover).
- Search content package “SAP Build Process Automation Integration with SAP ERP for Invoice”
- Click to open the package.
- Click Copy to import the integration content package to your workspace.
- Navigate to Design to open the imported content package.
- Open all Integration models, select Configure option.
  - set configured value as RFC Destination which was created in SAP BTP Cockpit
- Deploy the integration model.

© 2023 SAP SE or an SAP affiliate company. All rights reserved. See Legal Notice on www.sap.com/legal-notice for use terms, disclaimers, disclosures, or restrictions related to SAP Materials for general audiences.

Setup SAP Build Process Automation Content

Import Content

This template can be downloaded from the Store (Will be available if previous section steps are followed):

1. Navigate to the Store in your SBPA tenant.
2. Select the Project Type filter as “Process Automation”.
3. In the Search bar type “Manage Invoices without Purchase Order”
4. Select the “Create from Template” button to add the template into you lobby.

After successfully adding the template, navigate back to the lobby to find the “Manage Invoices without Purchase Order” template available for use.

Note:
Be sure to select the Project Type as “Process Automation” in the filters to get the correct SBPA package as there could be another template available for SAP Workflow / Live Process.

Configuration & Modification

Once you have added the content to your lobby, you will find the project in your project list. Before you can deploy and use it, you can configure it or adjust it to your own needs.

Configure Process

Manage Non PO Vendor Invoice

The process “Manage Non PO Vendor Invoice” does not need to be explicitly configured. It can be utilized after successful deployment.

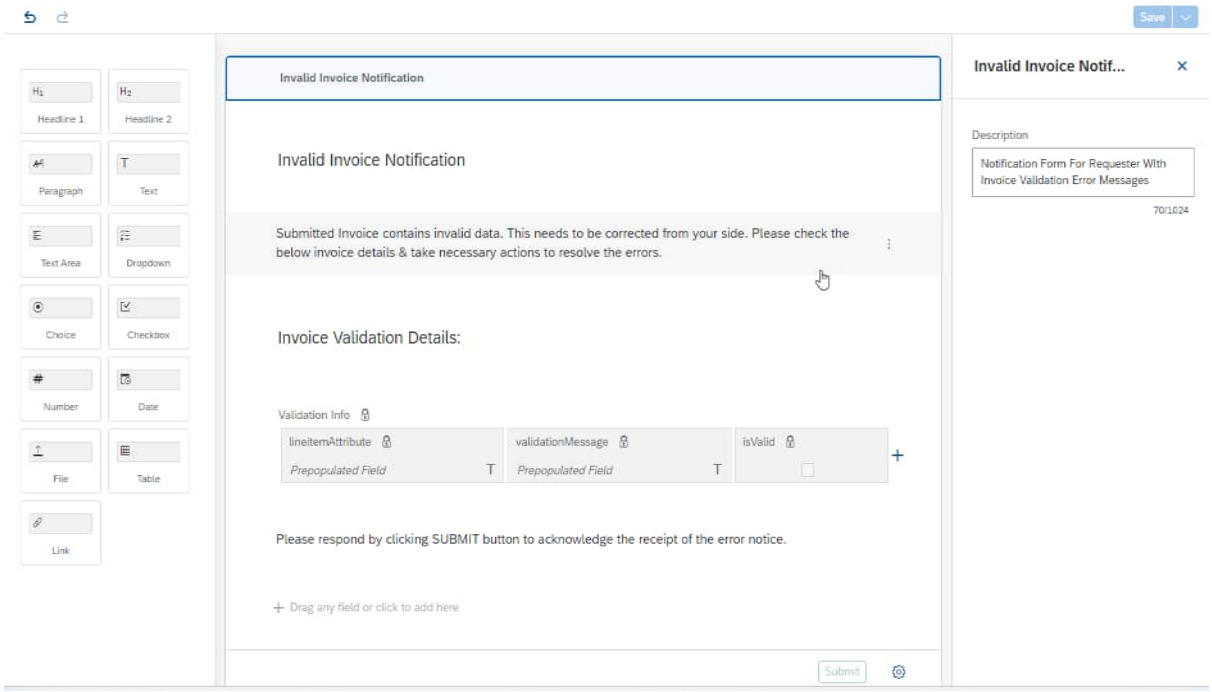
Configure Forms (Optional)

This template contains multiple forms. 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.

Following snippet shows the form with provided information for the requester:

© 2023 SAP SE or an SAP affiliate company. All rights reserved. See Legal Notice on www.sap.com/legal-notice for use terms, disclaimers, disclosures, or restrictions related to SAP Materials for general audiences.



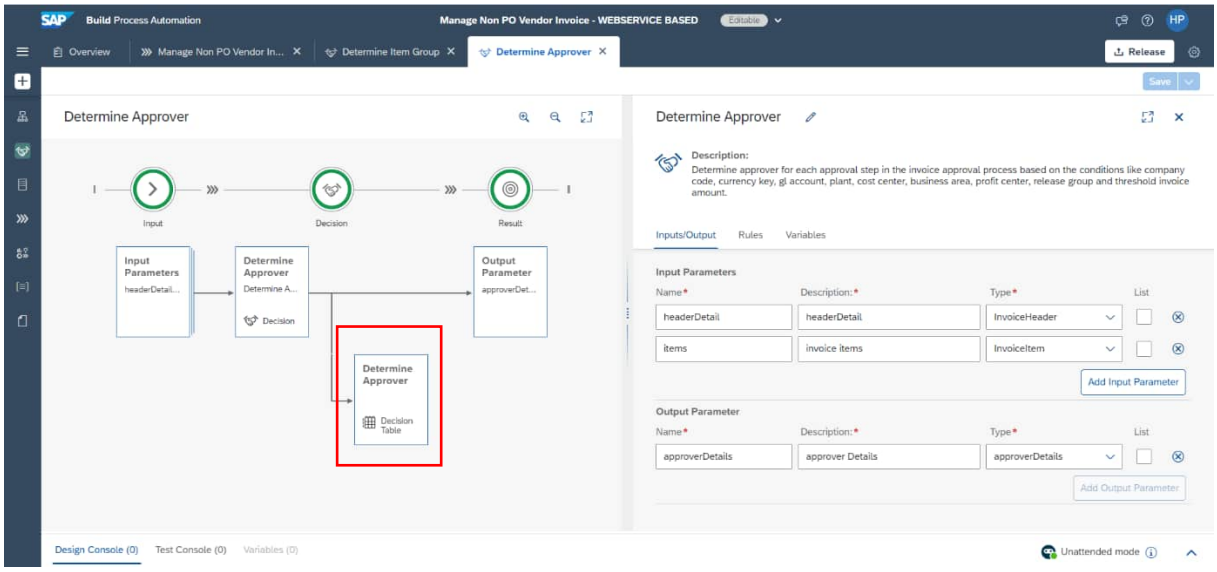
Configure Decisions

There are three decisions in this template

- Determine Item Group
- Determine Approvers
- Validate InvoiceItems

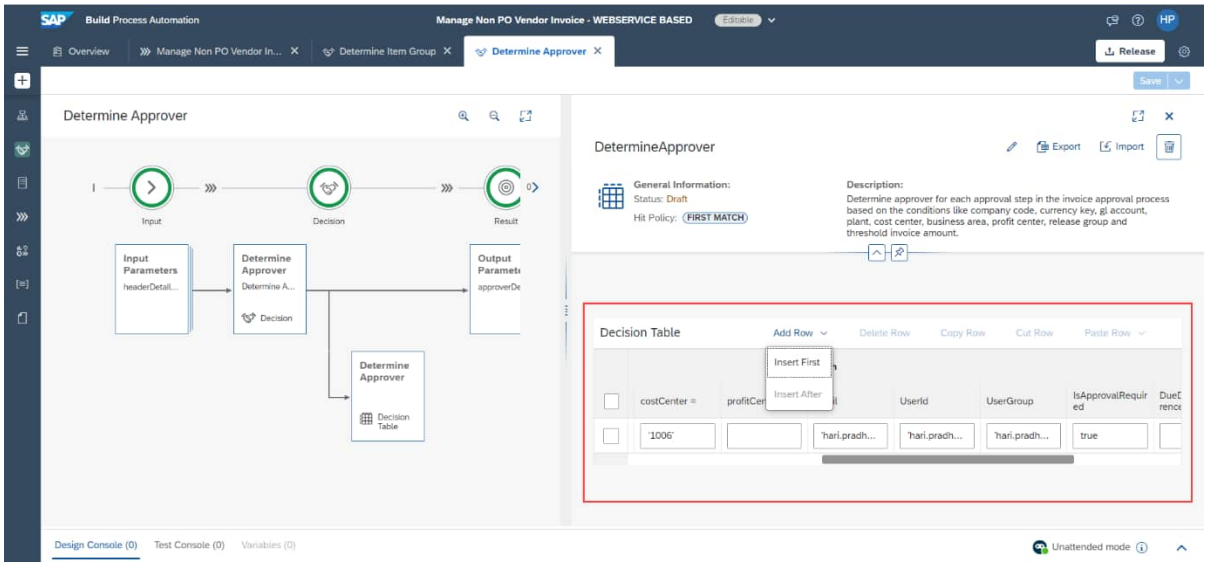
These decisions can be modified for different conditions and result values based on your business policies and requirements. To modify the decision:

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



© 2023 SAP SE or an SAP affiliate company. All rights reserved. See Legal Notice on www.sap.com/legal-notice for use terms, disclaimers, disclosures, or restrictions related to SAP Materials for general audiences.

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



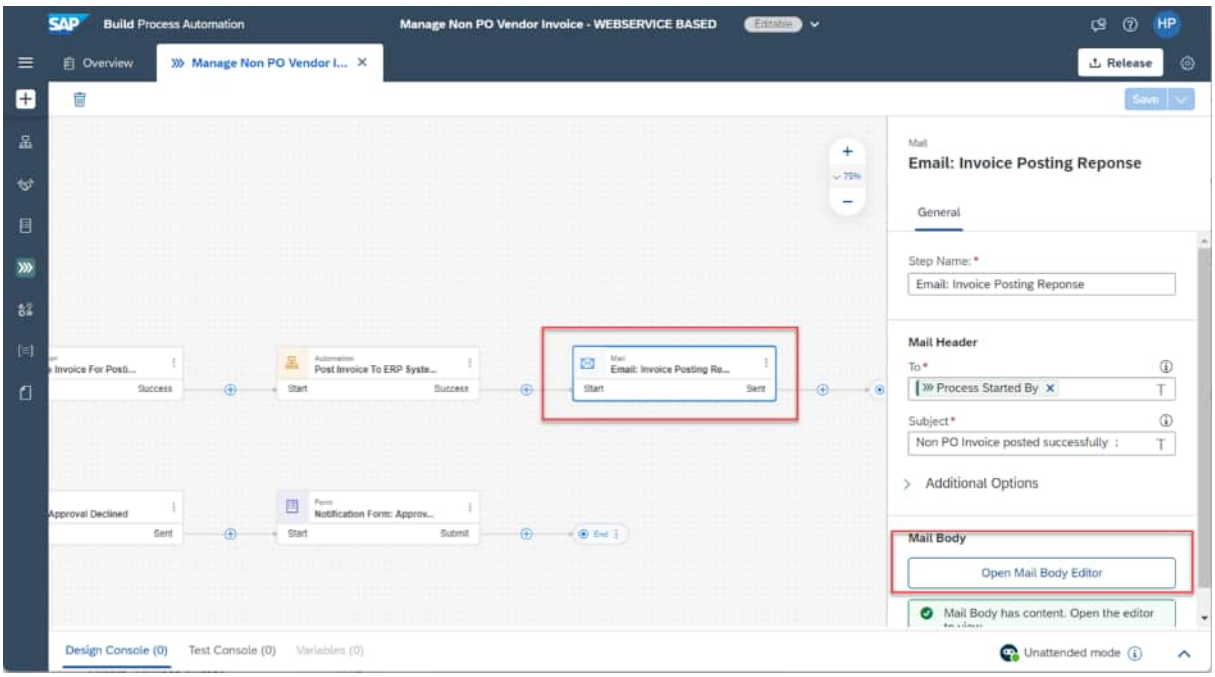
Configure Email

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

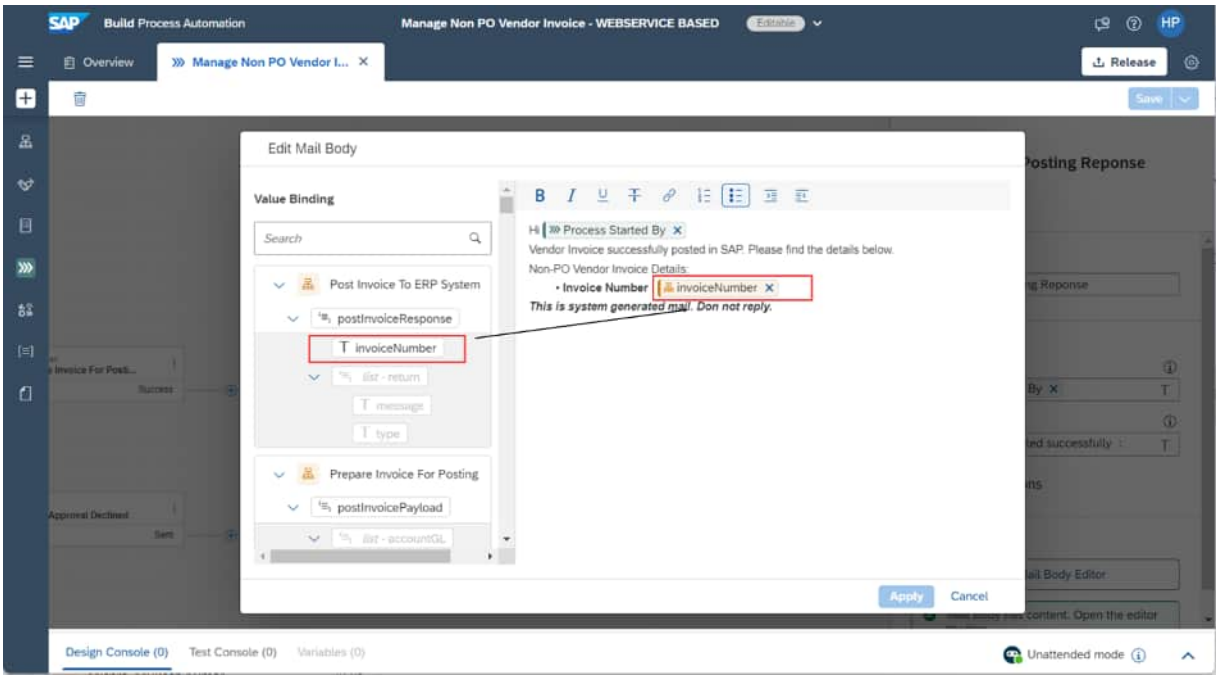
To update the email body content, do the following:

- 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.
- Click to ‘Open Mail Body Editor’.

© 2023 SAP SE or an SAP affiliate company. All rights reserved. See Legal Notice on www.sap.com/legal-notice for use terms, disclaimers, disclosures, or restrictions related to SAP Materials for general audiences.



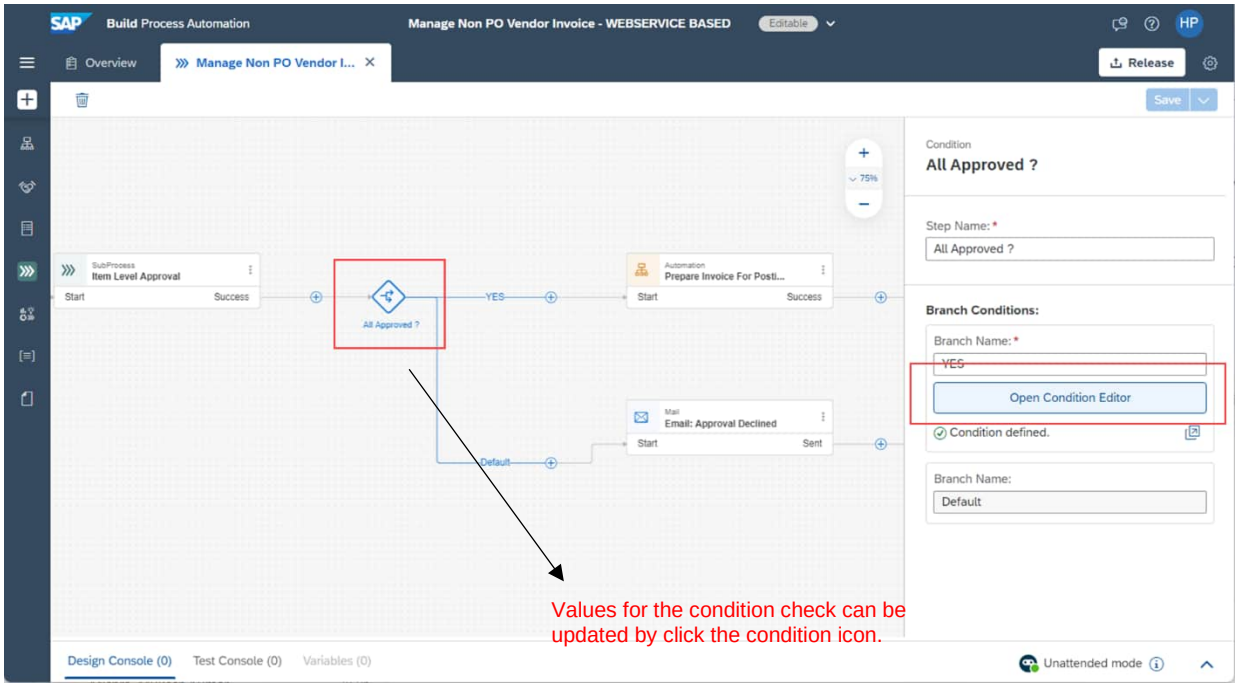
- The mail editor allows you to write and adjust text according to your needs. You can also reuse information that has been collected during the process. If you want to use additional process context data, you can simply drag the fields from the left menu to the editor on the right.

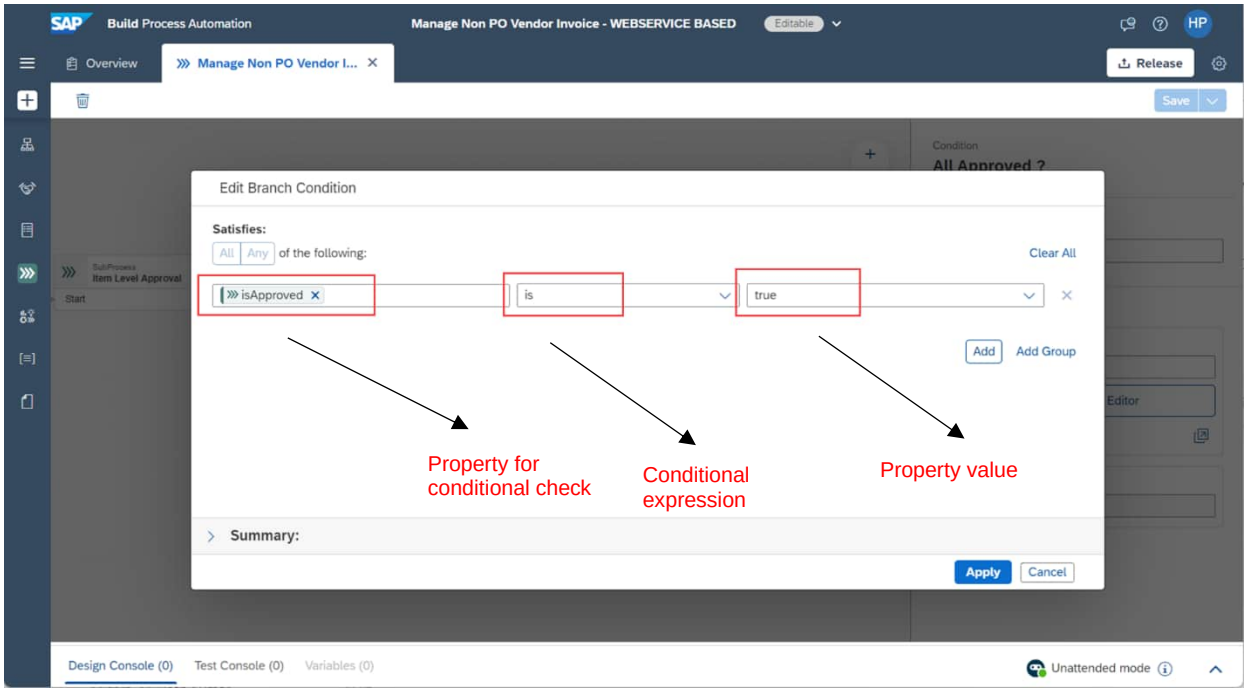


© 2023 SAP SE or an SAP affiliate company. All rights reserved. See Legal Notice on www.sap.com/legal-notice for use terms, disclaimers, disclosures, or restrictions related to SAP Materials for general audiences.

Configure Conditions & Branching (Optional)

The condition check or branching in the flow can be added based on requirements, following shows the conditional check for approver requirement.





© 2023 SAP SE or an SAP affiliate company. All rights reserved. See Legal Notice on www.sap.com/legal-notice for use terms, disclaimers, disclosures, or restrictions related to SAP Materials for general audiences.

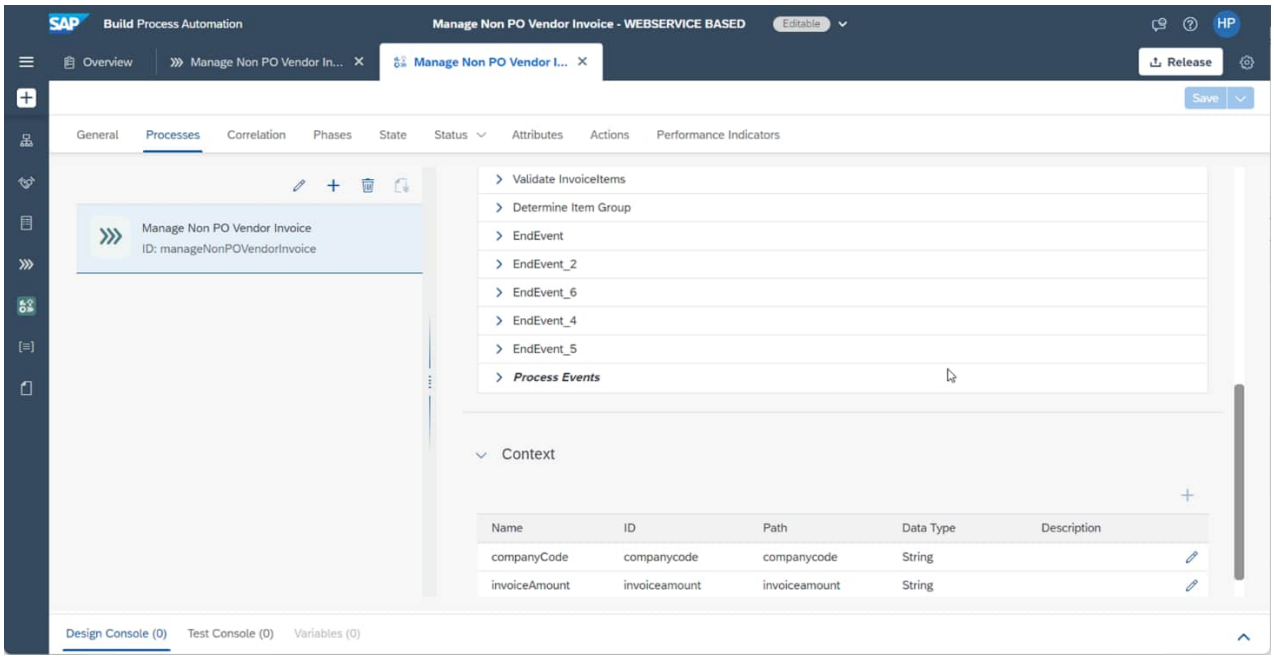
Configure Process Visibility (Optional)

This template has a pre-built dashboard with default business KPIs that can be used by the business users to track end-to-end processes in real-time. You can add more KPIs based on your business requirements.

To configure the visibility scenario:

- Open project '**Overview'** tab
- Select **Manage Non PO Vendor Invoice** (Visibility Scenario)
- Explore and change Phases, Attributes, Performance Indicators etc. Follow the documentation to learn how to configure process visibility scenario

In case you don't have access to the process visibility workspace where you can access the newly created dashboards, please contact your IT admin.



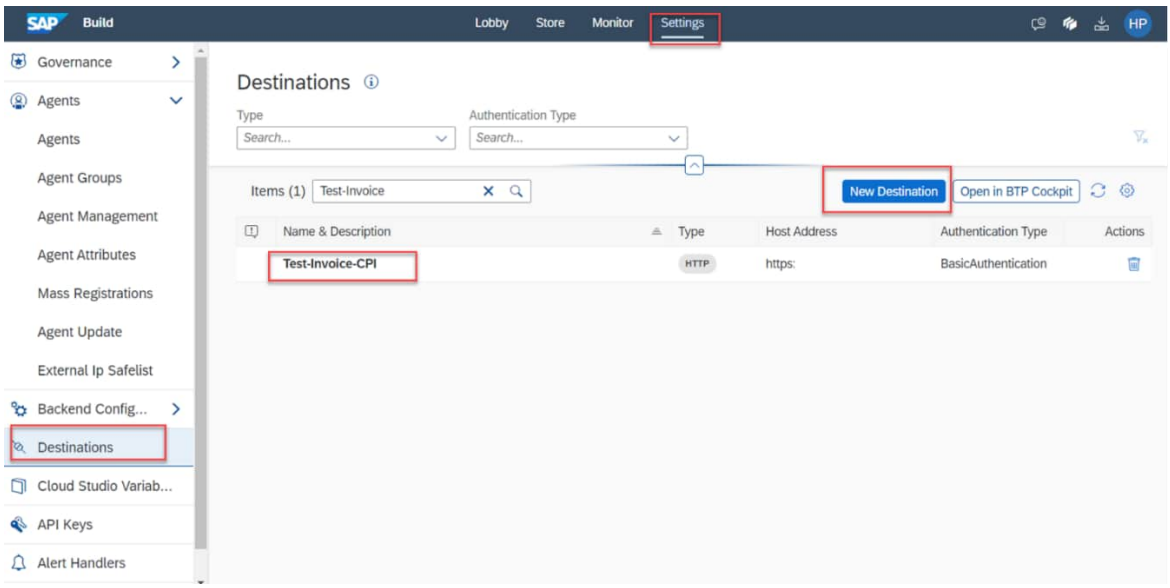
Configure Destination Settings

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

To configure destination,

- click on **Settings**.
- Select **Destinations** from the left panel.
- Click **New Destination**
- Select these destinations to be added.
  - Example: Test-Invoice-CPI

© 2023 SAP SE or an SAP affiliate company. All rights reserved. See Legal Notice on www.sap.com/legal-notice for use terms, disclaimers, disclosures, or restrictions related to SAP Materials for general audiences.



Release and Deploy Process

The package needs to be released & deployed after required configurations to trigger the process flow of Non-PO Vendor Invoice posting to ERP.

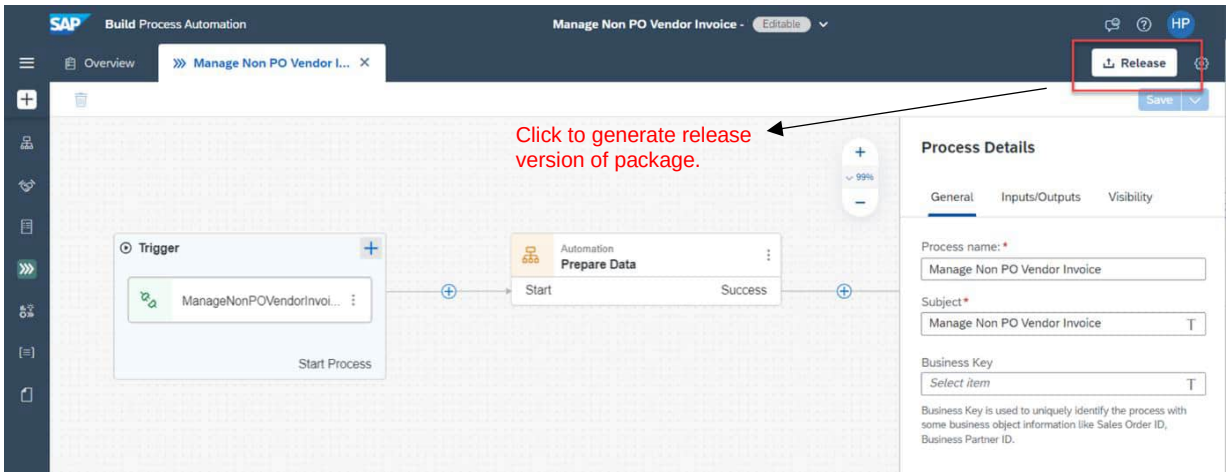
Release

The release of package locks the version of your process & no further modifications are allowed on that version of the package. This released version of the package can be used to deploy the package.

To release a version of your process:

- ensure that the status is listed as ‘Editable’.
- The click ‘Release’:

First release of the package is versioned as 1.0.0. All the subsequent release version gets updated version number & you can select from the released versions of the package to deploy any specific version.



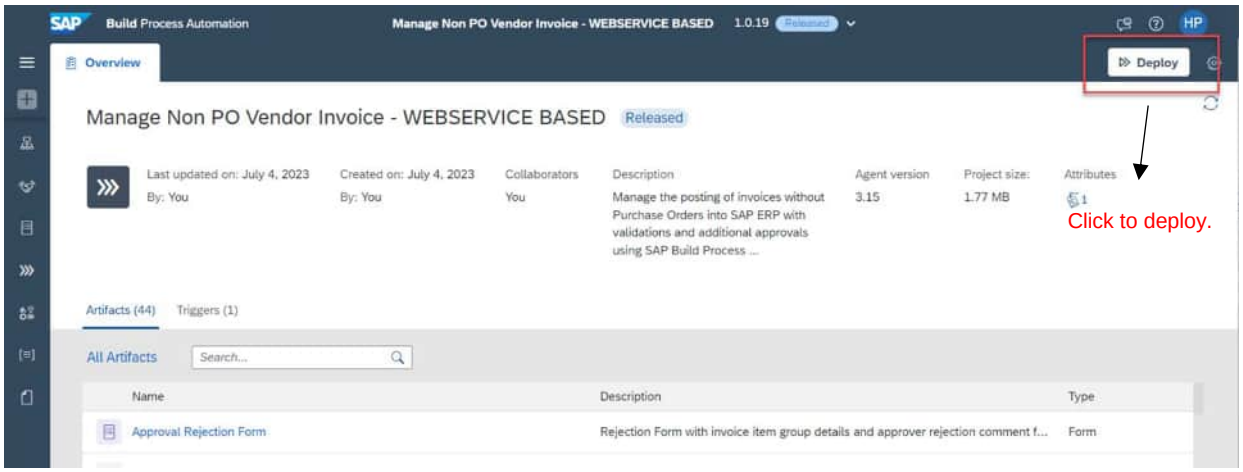
© 2023 SAP SE or an SAP affiliate company. All rights reserved. See Legal Notice on www.sap.com/legal-notice for use terms, disclaimers, disclosures, or restrictions related to SAP Materials for general audiences.

Deploy

The deployed package makes process available to be consumed by user. Its execution can be triggered by submission of trigger form, API trigger or using SAP UI5 application submission.

To deploy a released version of your process:

- ensure that the status is listed as ‘Released’.
- The click ‘Deploy:



While deploying the package you will be prompted to provide a Destination as an environment variable. Select the destination from the drop-down, this will be the destination you might have already configured in the section ‘Configure Destination Settings’.

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

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

Configure SAP Work Zone

Now that the process is released and deployed, you can configure **SAP Work Zone standard or advanced edition** to give access to your business users to (a) start the process and (b) track the process and business KPIs using process visibility workspace.

You can refer following links to configure SAP Work Zone standard edition:

- Follow the documentation to configure start form in Work Zone
- Follow the tutorial to configure Work Zone with visibility tiles

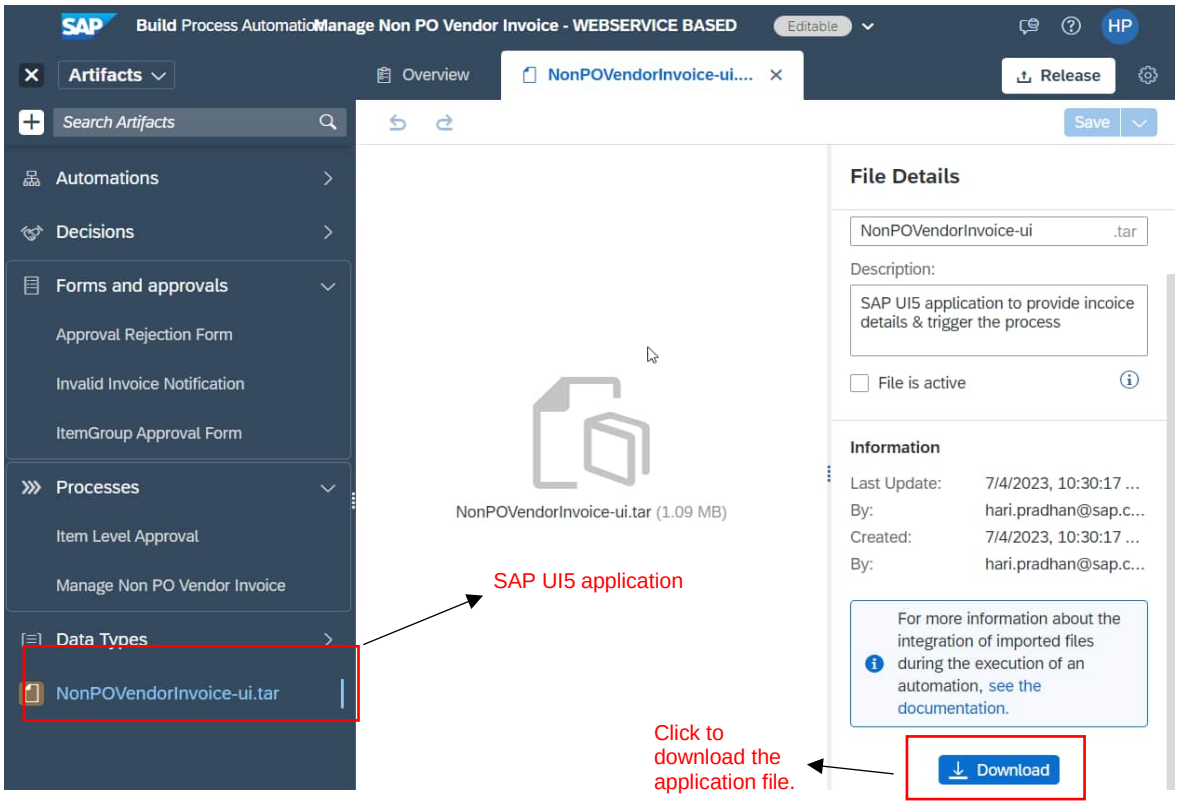
© 2023 SAP SE or an SAP affiliate company. All rights reserved. See Legal Notice on www.sap.com/legal-notice for use terms, disclaimers, disclosures, or restrictions related to SAP Materials for general audiences.

SAP Business Application Studio for SAP UI5 Application

Import and deploy SAPUI5 application

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

- Download the SAPUI5 application file from the imported store project, it will available under the file section in the package.

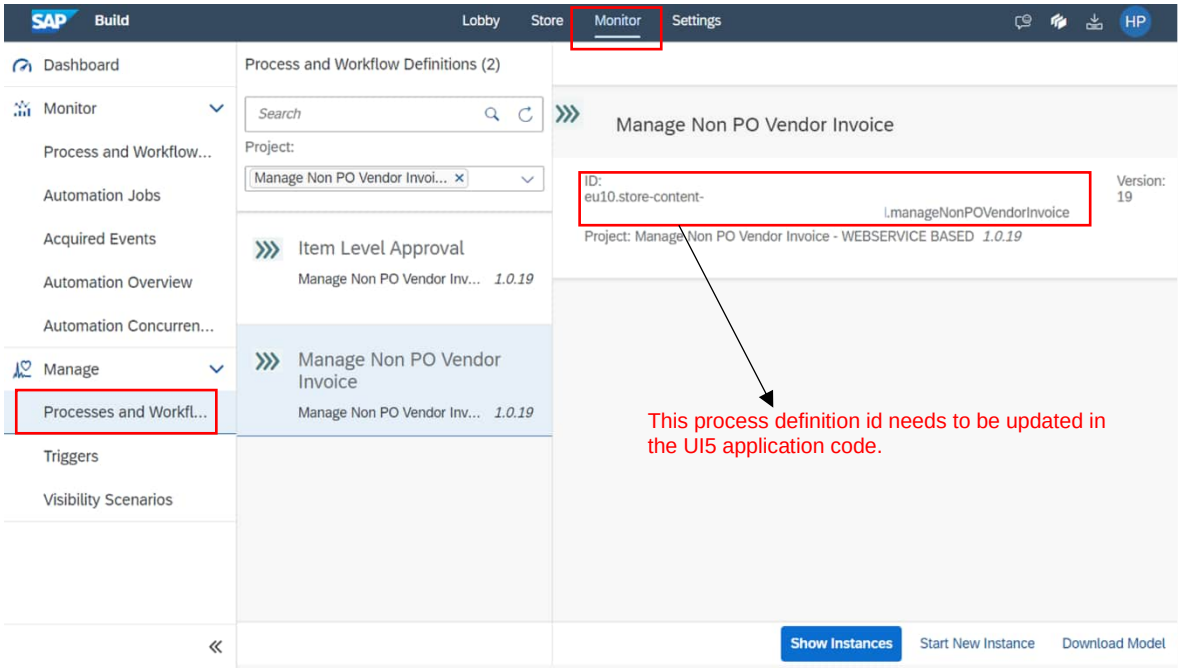


- Open Business Application Studio and import the previously downloaded SAPUI5 project.
- Ensure that you have already created the SBPA instance and the same instance details need to be updated in the mta.yaml file available in the SAP UI5 application project.



© 2023 SAP SE or an SAP affiliate company. All rights reserved. See Legal Notice on www.sap.com/legal-notice for use terms, disclaimers, disclosures, or restrictions related to SAP Materials for general audiences.

- Update your process definition id (Package needs to be deployed) in the **Create.controller.js** file as shown in the following snippets:
-





- Build SAPUI5 project using mta.yaml file & the generated project (generated mtar file will be available in the **mta_archieves** folder) file can be deployed.
- After successful deployment of the project, it can be accessed using through SAP standard work zone & user can provide the required invoice details & save the form for the invoice posting to the ERP system.

© 2023 SAP SE or an SAP affiliate company. All rights reserved. See Legal Notice on www.sap.com/legal-notice for use terms, disclaimers, disclosures, or restrictions related to SAP Materials for general audiences.

Capabilities

This sample content contains the following elements as key artifacts (detailed explanation with snippet also provided in later section of the document):

For detailed information about different artifacts, please refer help documentation.

Icon	Type	Name	Description
	Main Process	Manage Non PO Vendor Invoice	This is the main process that gets started on successful submission of SAP UI5 application form. It contains all the related process activities responsible for posting of vendor invoice to the ERP system
	Sub Process	Item Level Approval	This sub process is responsible for execution of item level approval process & determination of approval details (approved/declined status & approver comments)
	Form	Notification Form: Failed ERP validation	Notification form for the requester with required ERP validation error messages
	Form	ItemGroup Approval Form	Approval form that is sent to the responsible approver for item group approval. Approver can provide required comment & approve/reject the invoice item details.
	Form	Notification Form: Failed Tax Calculation	This form provides the required tax calculation error response to the requester
	Form	Notification Form: Invalid Invoice	This form provides the required information about the failed invoice validation by decision
	Automation	Prepare Data	Automation to prepare data received from SAP UI5 application for the tax calculation & for the subsequent process activities
	Automation	Get Tax Calculated	Automation to fetch tax calculation with usage of web service call & destination
	Automation	Prepare Invoice	Automation to prepare invoice data for ERP Validation
	Automation	Check Invoice	Automation to validate invoice through ERP using web service call with destination
	Automation	Prepare Approval Data	Automation to prepare item group data for the approval to the responsible approver(s)

© 2023 SAP SE or an SAP affiliate company. All rights reserved. See Legal Notice on www.sap.com/legal-notice for use terms, disclaimers, disclosures, or restrictions related to SAP Materials for general audiences.

	Automation	Prepare Invoice For Posting	Automation responsible for preparing invoice data for posting to the ERP system after successful approval of invoice details by all approvers
	Automation	Prepare Item Group	Automation to determine cost object & group invoice items for approval
	Automation	Post Invoice To ERP System	Automation to post invoice to the ERP system with usage of web service call & destination
	Automation	Approver Rejection Status	Automation responsible for returning approval decisions with declined status details
	Automation	Auto Approved	Automation responsible for returning approval decisions with approved (Auto Approved) status details
	Automation	ItemGroup Approved	Automation responsible for returning approval decisions with Approved status details
	Mail	Email: Invoice Posting Response	Email notification to requester & approver(s) (if provided) on successful execution of /PostInvoice CPI call
	Mail	Email: Failed Tax Calculation	Email notification to requester on failed tax calculation on provided invoice details
	Mail	Email: Failed ERP Validation	Email notification to requester on failed ERP validation of invoice details
	Mail	Email: Approval Declined	Email notification to requester & approver(s) (if provided) on rejection of invoice request
	Mail	Email: Approval Request For Non PO Vendor Invoice	Email notification to approver for the approval request for Non PO Vendor Invoice
	Decision	Validate InvoiceItems	Validates the invoice details based of the configured decision rule
	Decision	Determine Approver	Determines the approver details to whom the approval request needs to be delegated based on the invoice details & decision table rule
	Decision	Determine Item Group	Determines the cost object on invoice item details to be used for creation of item groups & these items groups with related items details are sent to responsible approvers for the approval

Process & Triggers

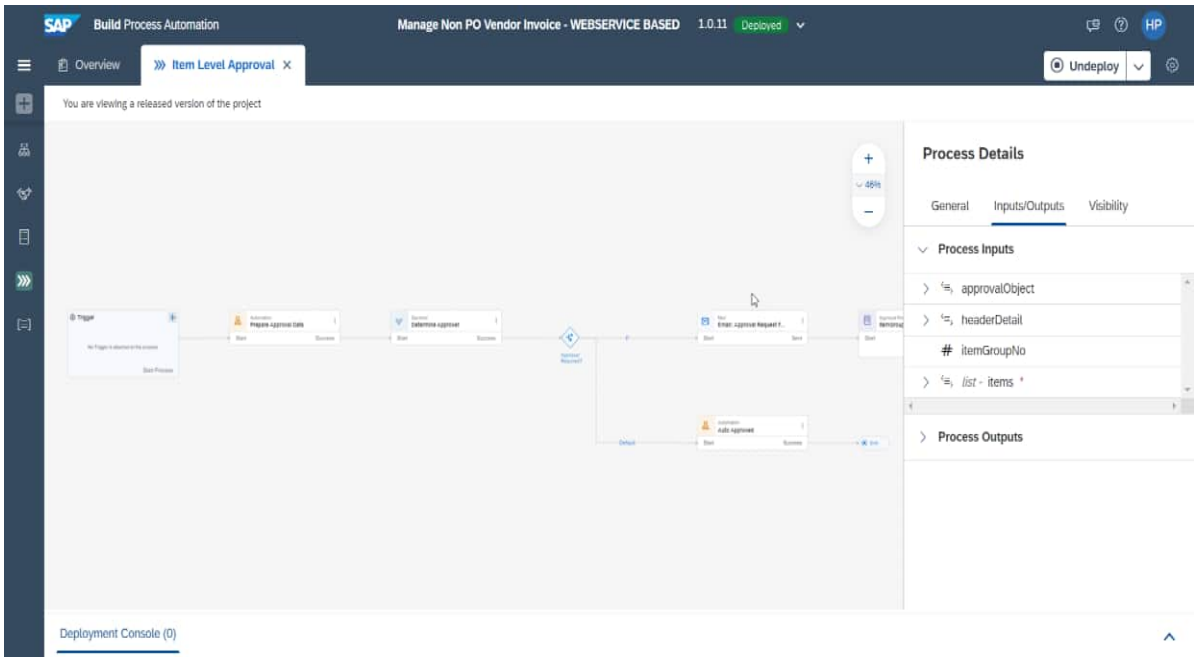
© 2023 SAP SE or an SAP affiliate company. All rights reserved. See Legal Notice on www.sap.com/legal-notice for use terms, disclaimers, disclosures, or restrictions related to SAP Materials for general audiences.

Item Level Approval

This is the sub process responsible for performing the invoice approval. This includes activities responsible for preparing the required invoice data, determining the approver & capturing the approval status from the responsible approver.

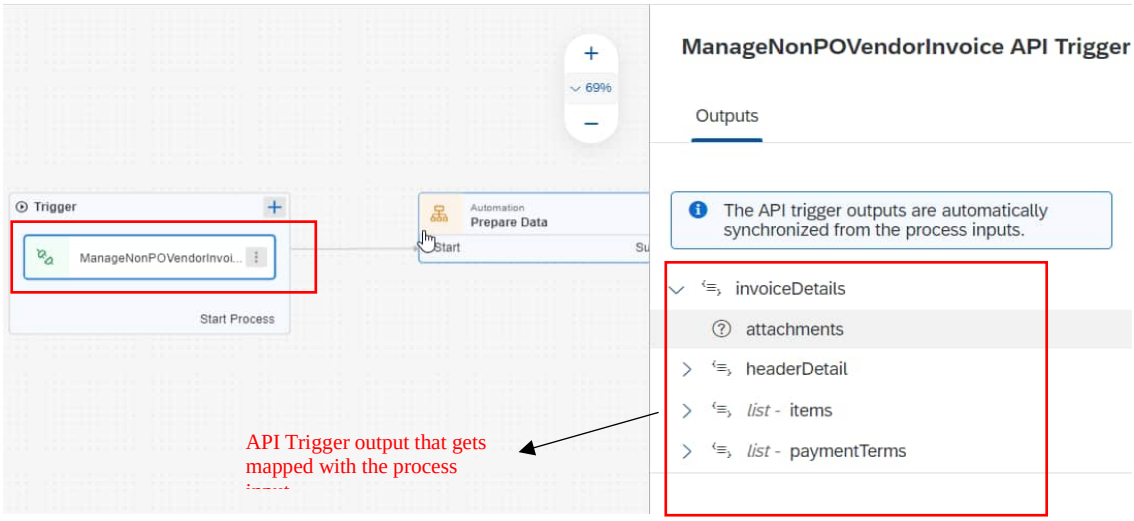
This includes different artifacts & can be configured based on the requirement. For example, decision to determine approver can be modified based on specific business criteria.

Following is the snippet from this process:



API Trigger

This process gets triggered after successful deployment & submission of invoice details through SAP UI5 application. For this API trigger (ManageNonPOVendorInvoice API Trigger) is configured in the main process which is responsible for getting invoice details as submitted from SAP UI5 application & its output is automatically mapped to the configured process input.

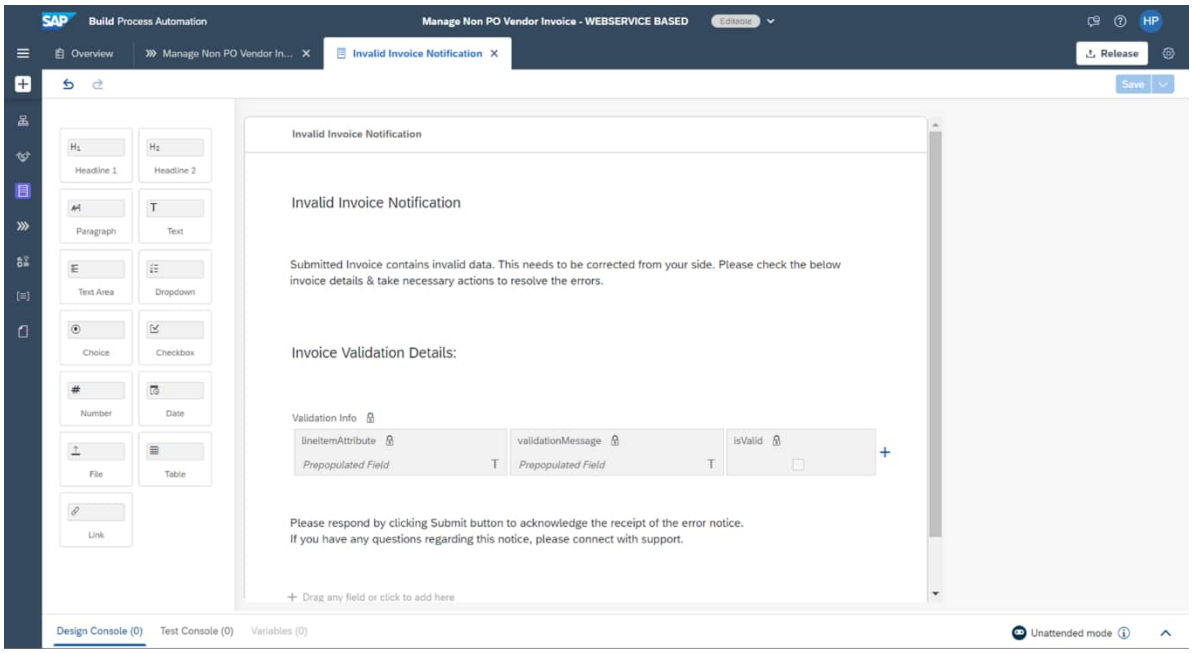


© 2023 SAP SE or an SAP affiliate company. All rights reserved. See Legal Notice on www.sap.com/legal-notice for use terms, disclaimers, disclosures, or restrictions related to SAP Materials for general audiences.

Forms

Notification Form: Invalid Invoice

This form notifies the requester with invoice validation messages. This can be configured to provide information as per the requirement.

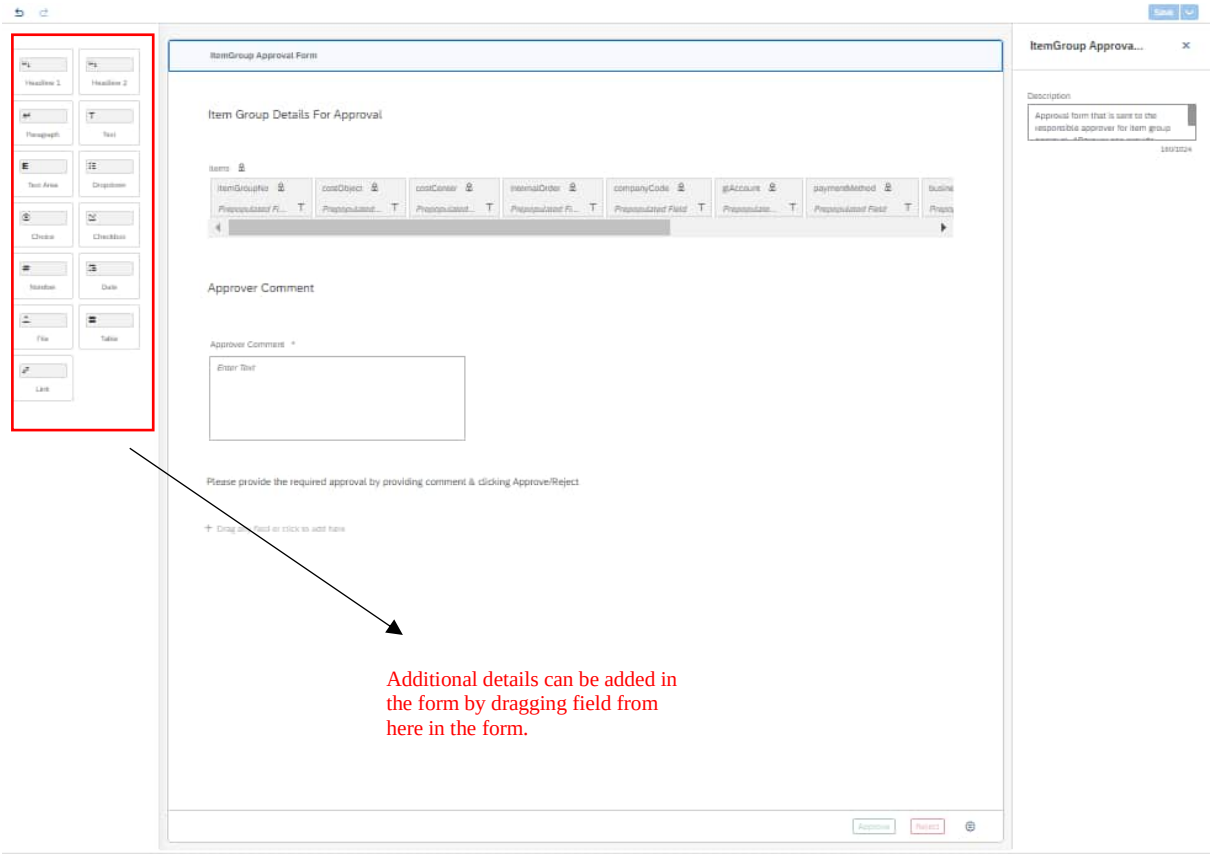


ItemGroup Approval Form

This form can be configured to provide additional information to the responsible approvers.

Following snippet shows the form with item group information that can be reviewed by the approver:

© 2023 SAP SE or an SAP affiliate company. All rights reserved. See Legal Notice on www.sap.com/legal-notice for use terms, disclaimers, disclosures, or restrictions related to SAP Materials for general audiences.



Decisions

This package includes few decisions that can be updated based on the requirement. These decisions allow to encapsulate the business logic from core applications and supports the reuse of decision rules across different business processes. It enables customers to adopt changes in processes without changing the underlying process flows or application logic. Non PO Vendor Invoice process will enable the customers to flexibly configure decisions to gain the flexibility.

Followings are some of the decisions used the process:

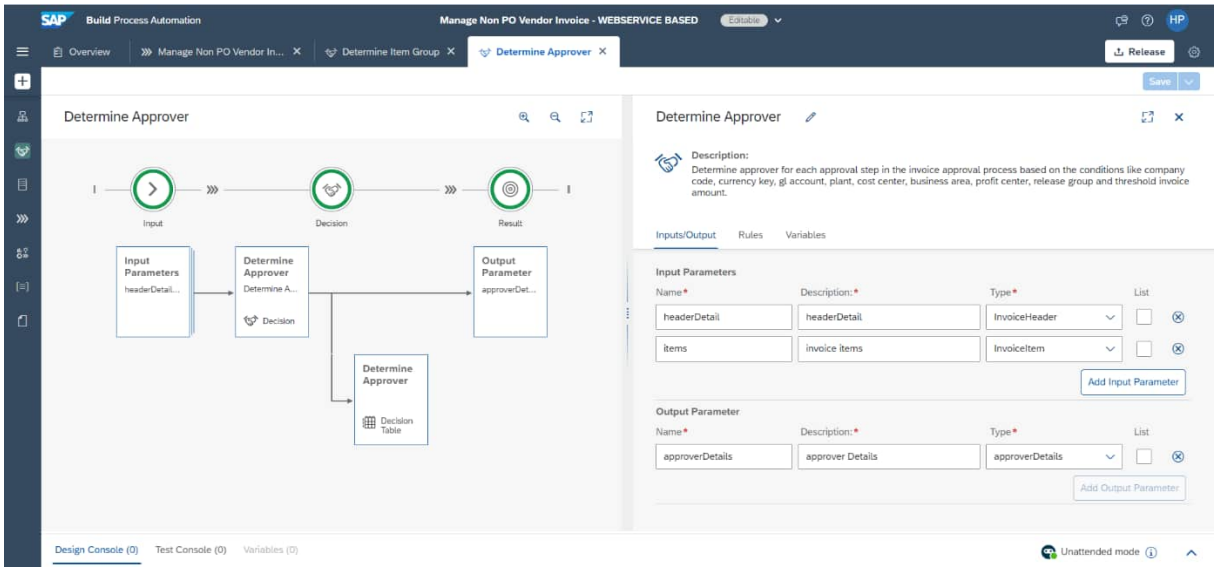
Determine Approvers

This decision rule is used in the Item level Approval process for determining the approver details such as approver email, approver id, approver group etc based on the invoice details.

To check or update the input & output parameter of the decision, it can be accessed in the process & can be updated accordingly with the required data types.

Following diagram shows the usage of headerdetail & approverDetails datatypes for input & output respectively:

© 2023 SAP SE or an SAP affiliate company. All rights reserved. See Legal Notice on www.sap.com/legal-notice for use terms, disclaimers, disclosures, or restrictions related to SAP Materials for general audiences.



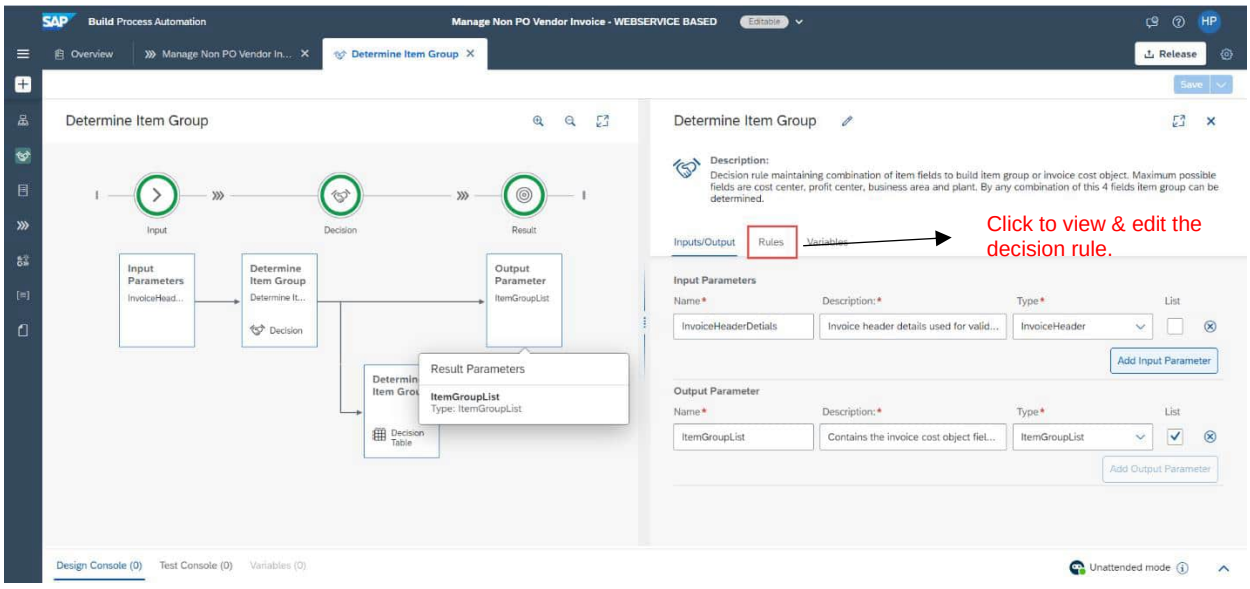
Determine Item Group

This decision rule determines item group field combination for approval process that will be used in the process to delegate the required item group invoice details to the responsible approver for approval.

The maximum combination of item group fields is cost center, profit center, business area and plant that can be used for creation of cost object value for item grouping.

For example, combination of glAccount (‘10101’) & cost center (5000) can be used to generate cost object as ‘10101500’.

Following diagram shows the usage of invoice headerDetails & itemGroupList datatypes for input & output respectively.



Important Notes:

© 2023 SAP SE or an SAP affiliate company. All rights reserved. See Legal Notice on www.sap.com/legal-notice for use terms, disclaimers, disclosures, or restrictions related to SAP Materials for general audiences.

In the above decision we can see the ‘FieldName’ as ‘costCenter’. It means this decision matches every company code & creates a cost object whose value will be based on the cost center value.

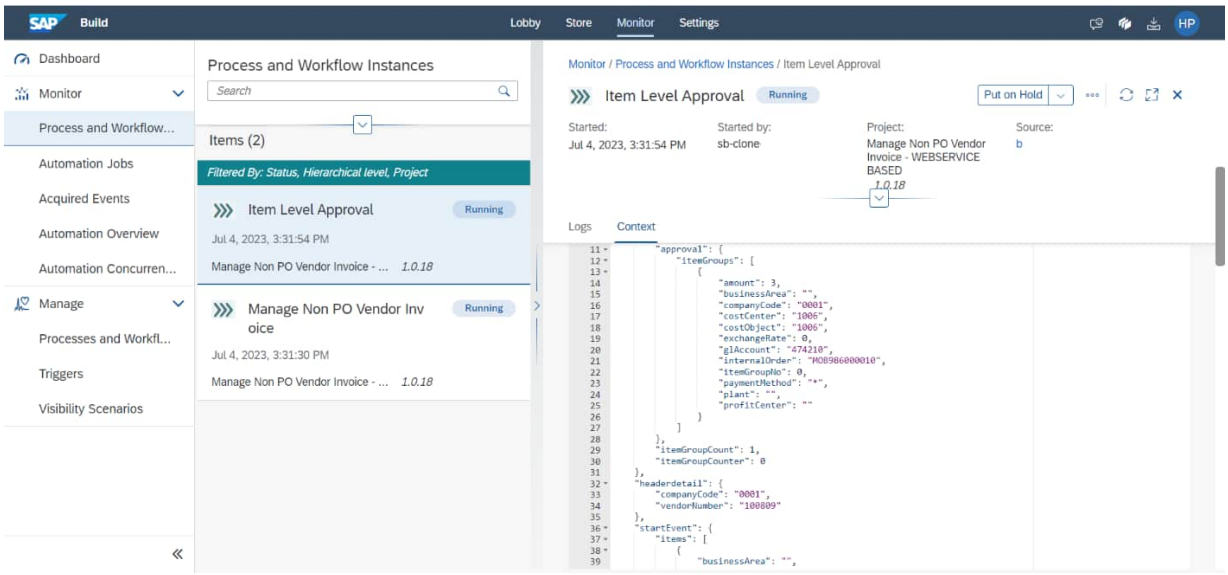
Currently, SAP build process doesn’t support iteration, if input parameter used in the above decision results in creation of multiple cost objects, it will result in determination of different approvers for individual item groups. For that reason, you need to select the field which will be common for all the items, so that the generated item groups are not more than 1.

In above example cost center is same for all the line item & only one item group will be created & based on ‘Determine Approver’ decision, item group data will be sent to the responsible approver for the approval.

The process is provided with all the implementation to dynamically create the item groups based on the ‘Determine Item Group’ decision & its implementation is provided in the automation ‘Prepare Item Group’, but you will be able to utilize multiple cost objects & different approvers for different item groups when iterative approach will be available with the SBPA tool.

You can monitor your process context & check the values from different artifacts.

Following snippet shows context values:



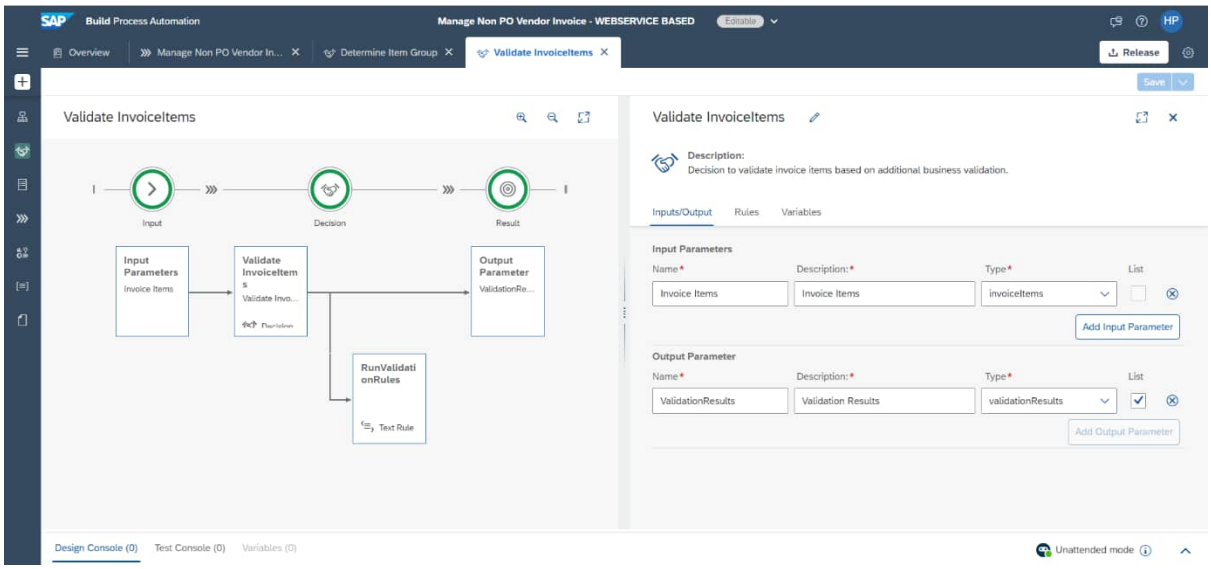
Validate InvoiceItems

© 2023 SAP SE or an SAP affiliate company. All rights reserved. See Legal Notice on www.sap.com/legal-notice for use terms, disclaimers, disclosures, or restrictions related to SAP Materials for general audiences.

This rule validates the line items based on the specified business validation & returns the list with validation result. Based on returned validation result subsequent process steps are followed, or process ends with email notification to the requester with validation error message.

For example, rule can be used to enable/disable the cloud application for a specific company code, invoice date, currency, cost center, plant etc.

Following snippet shows the rule's input, output & rule configuration:



Email Notifications

Email notification has been used in multiple points in the process flow that notifies the required recipient with the needed information:

- Email: Invoice Posting Response: Notifies the requester & the approvers (if any) about the response of Invoice posting to the ERP with required response message & Invoice ID (on successful Invoice posting).
- Email: Approval Declined - Notifies the requester & the approvers (if any) with the provided approvers comment on request decline with the provided Invoice details.
- Email: Failed ERP Validation - Notifies the requester with the ERP validation error message that can be referred by requester to try again with valid Invoice data.
- Email: Invalid Invoice - Notifies the requester with the error message as returned by decision that validates the invoice data.

Automations

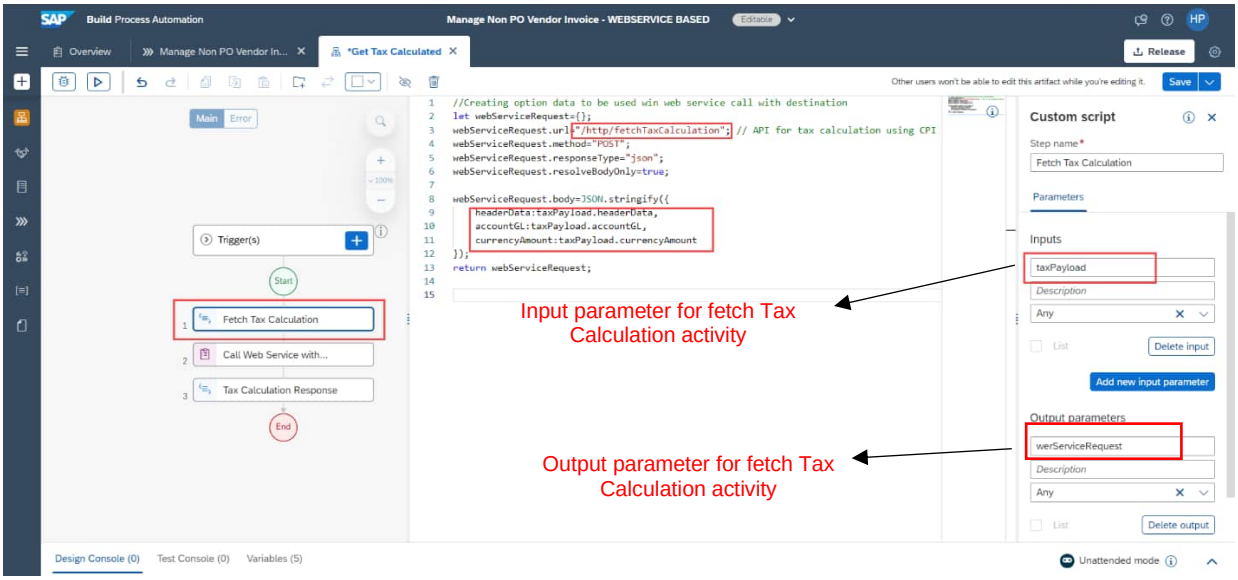
© 2023 SAP SE or an SAP affiliate company. All rights reserved. See Legal Notice on www.sap.com/legal-notice for use terms, disclaimers, disclosures, or restrictions related to SAP Materials for general audiences.

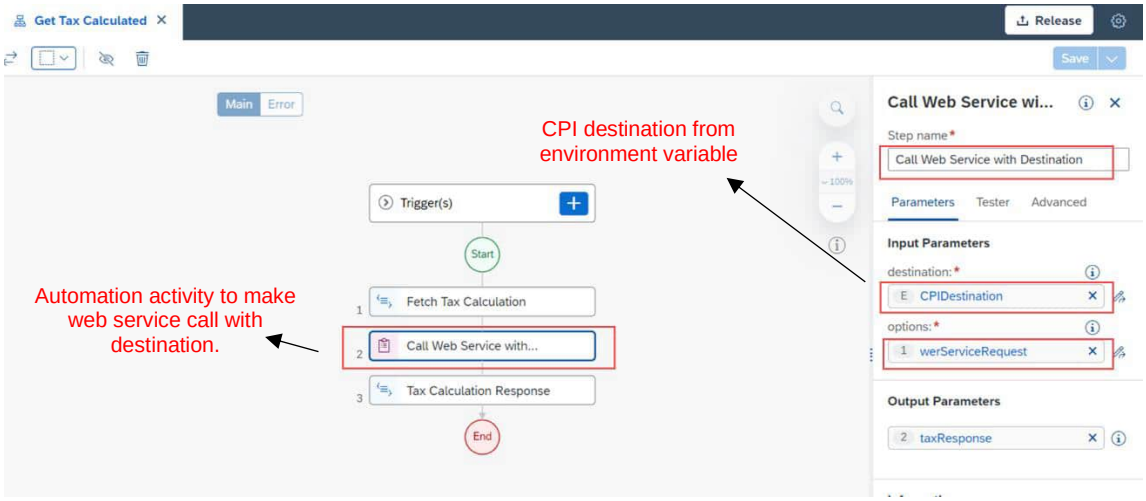
This package includes several automation bots for performing different calculation that includes preparing invoice data for tax calculation, preparing data for ERP validation, preparing data for different decision used in the process, preparing invoice data for invoice posting to the ERP system etc.

Followings provides details about one automation:

Get Tax Calculation

This automation is responsible for creating option data for web service call with destination to fetch tax calculation from ERP system. This automation like any other automation in the process utilizes custom script activity to create proper payload structure using JavaScript programming language.





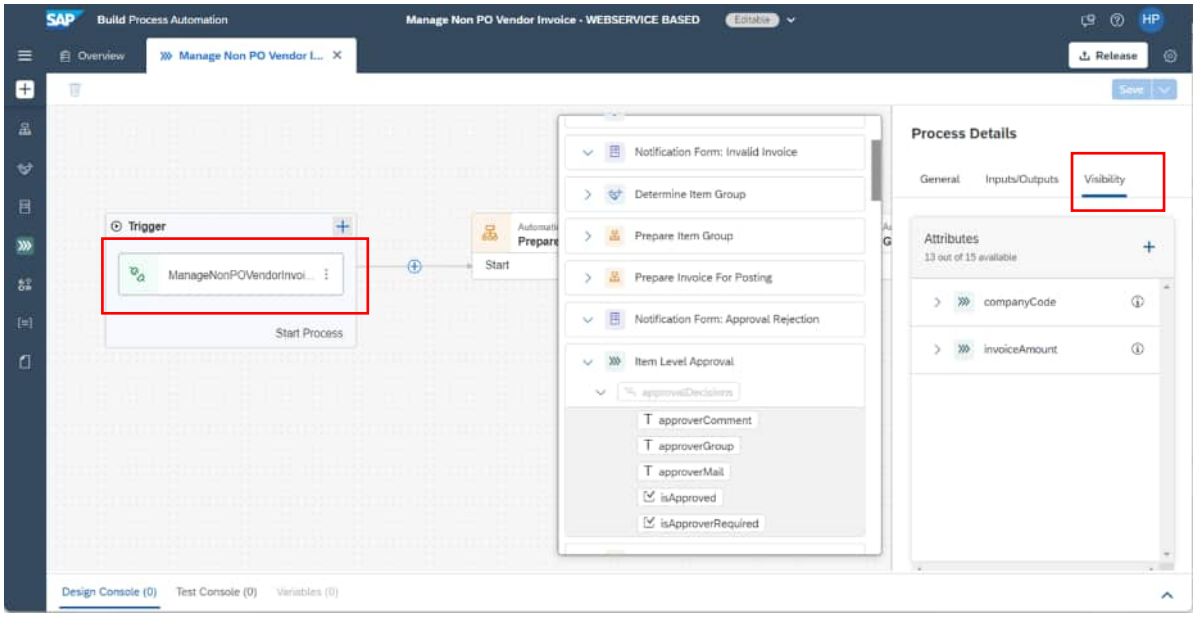
All the automation in the process is provided with required comment (like above) for understanding the functionality of the custom script code that can be referred in case any update needed as per the requirement.

© 2023 SAP SE or an SAP affiliate company. All rights reserved. See Legal Notice on www.sap.com/legal-notice for use terms, disclaimers, disclosures, or restrictions related to SAP Materials for general audiences.

Process Visibility Scenario

The visibility scenario is a dashboard which allows business users to track relevant process KPIs and statuses. A default dashboard is provided with this template, and it can be customized by selecting attributes from your process which you want to track in the process dashboard.

You can create visibility scenario artifact like any other artifacts in the process. After creating it click the processes tab & select the required process.

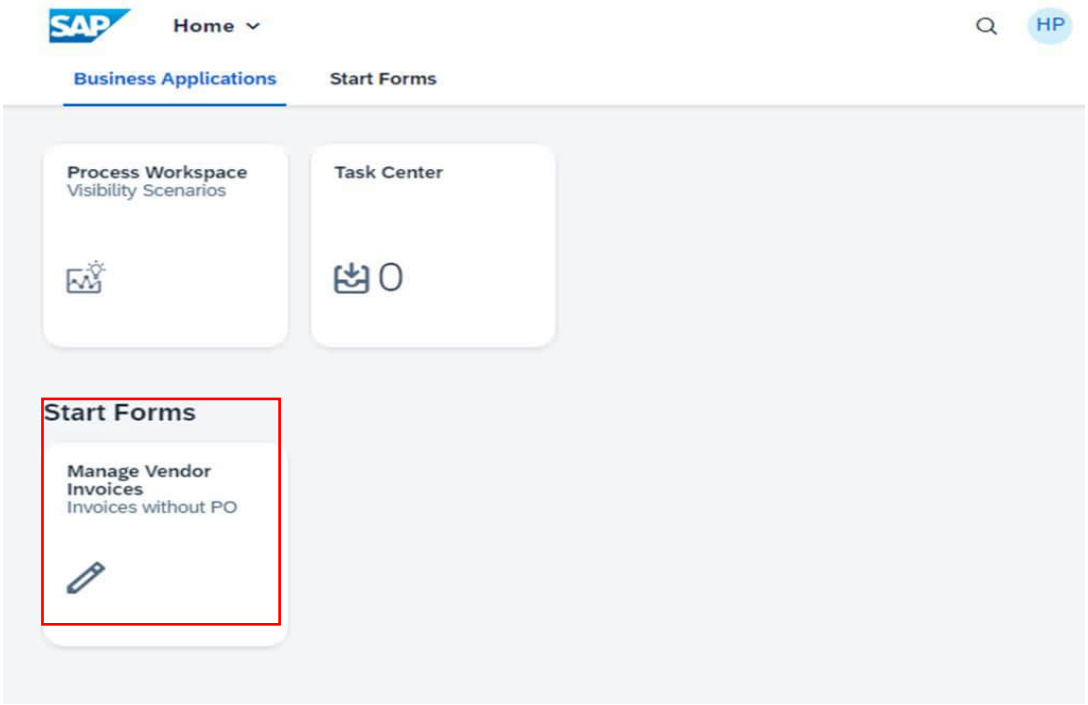


© 2023 SAP SE or an SAP affiliate company. All rights reserved. See Legal Notice on www.sap.com/legal-notice for use terms, disclaimers, disclosures, or restrictions related to SAP Materials for general audiences.

Trigger Process

This process can be triggered by submitting the SAP UI5 application form. Follow following steps to start the process:

- Access the SAP UI5 start form through SAP Work Zone



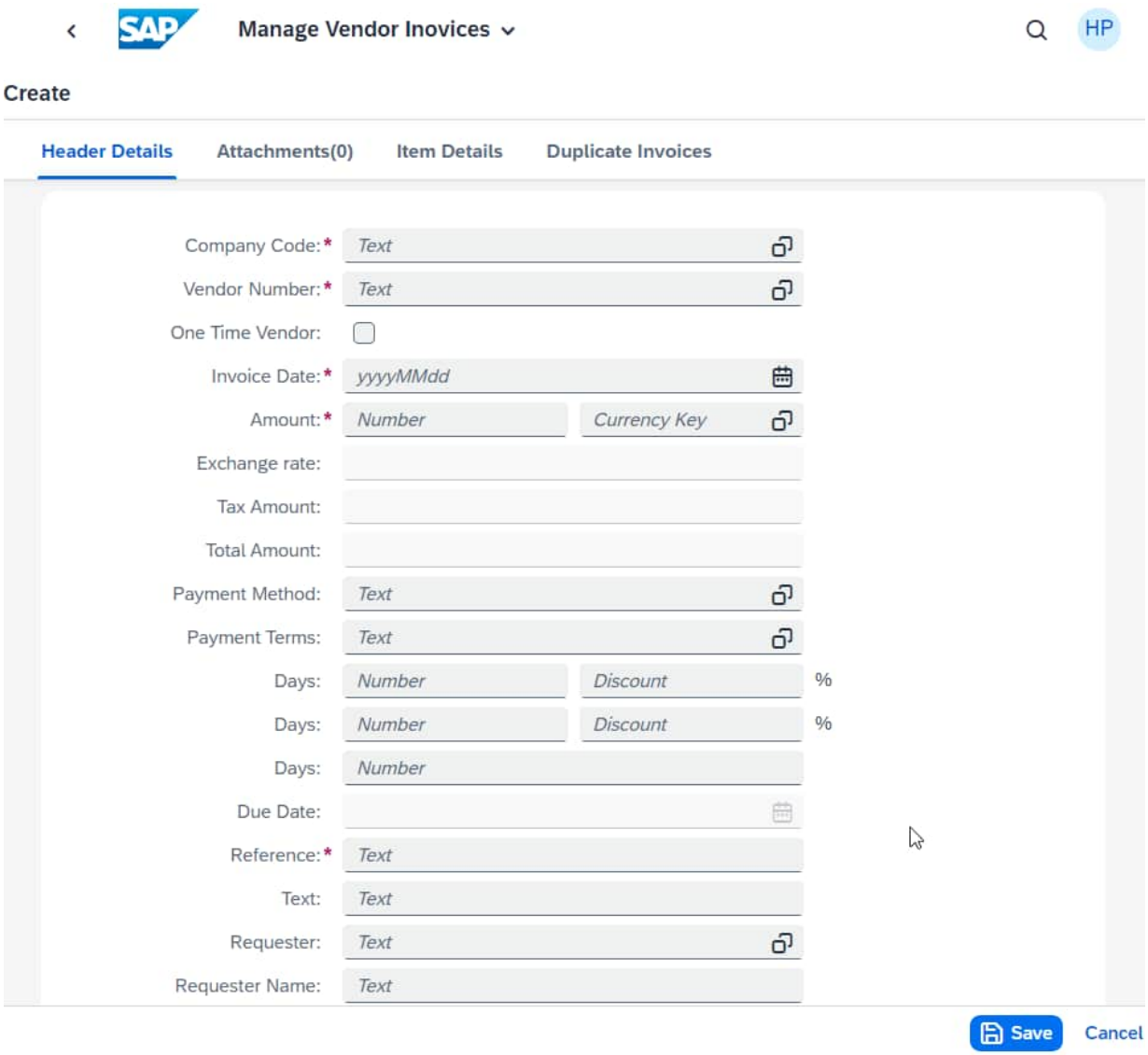
- Fill the required invoice details by accessing different section such as Header Details, Item Details, Attachments, Duplicate Invoices
    - This SAP UI5 application also includes feature of search help that will allow user to search with known values to get the correct field value.
    - It also includes invoices fields whose values gets auto calculated & auto filled based on the dependent invoice field value.

      For example:

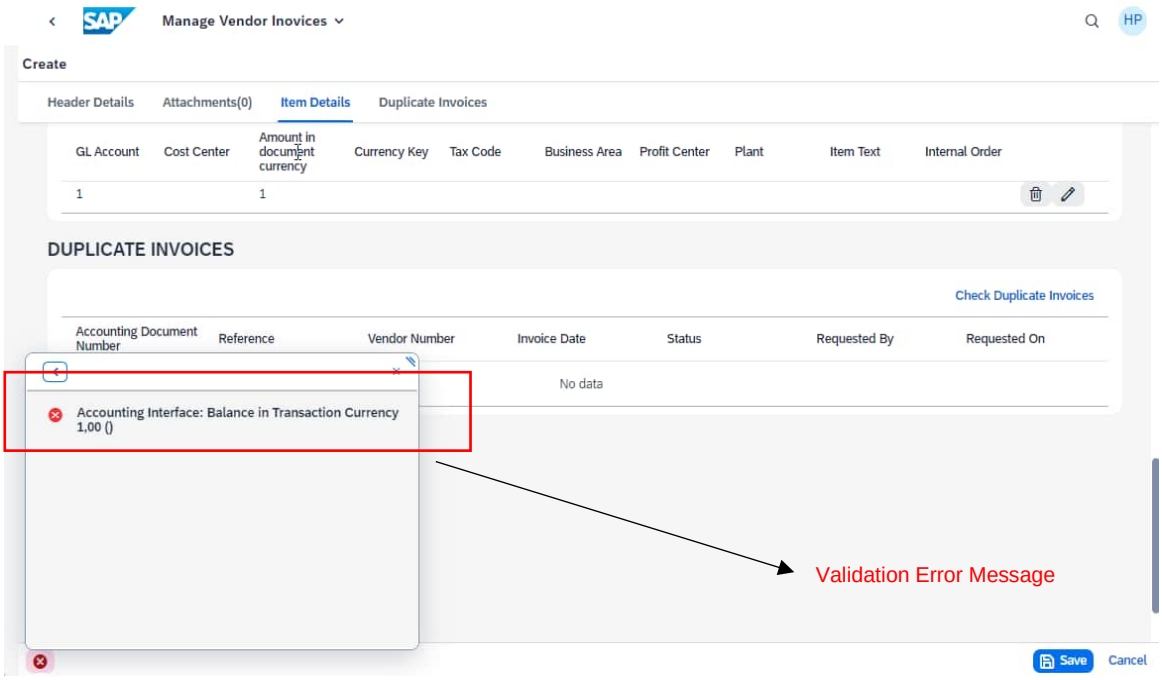
      Based on the Vendor Code selected, the Payment Terms will be automatically retrieved from the Vendor master and populated in the Header details. If the Vendor is not mapped with the Payment Term in SAP ERP, user can enter the Payment Term manually in the header details.

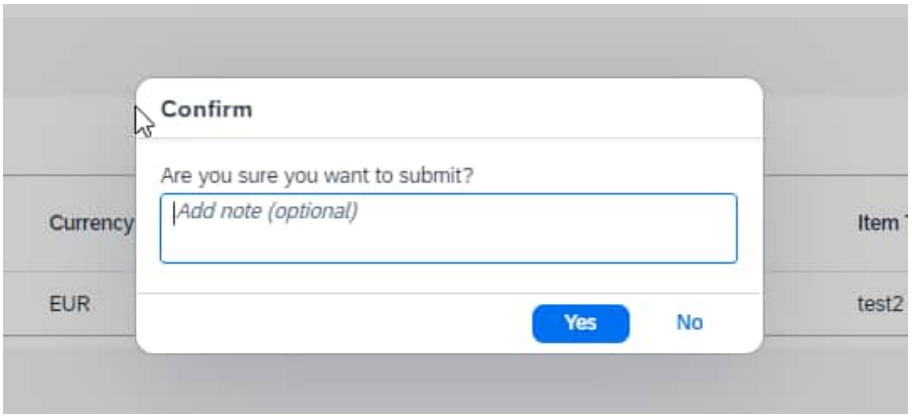
      The Due Date will be automatically calculated based on the Invoice date and the Payment Term. Out of the 3 days mentioned in the below screenshot, system considers the last highest days to calculate the Due Date.
    - On click of ‘Save’ button, the validations are performed (mandatory field checks, validate the information provided with master data) and appropriate messages will be shown to the user.
    - If the validation is successful, the Initiator will have the option to provide a comment (optional) that will be shared with the approver(s).

© 2023 SAP SE or an SAP affiliate company. All rights reserved. See Legal Notice on www.sap.com/legal-notice for use terms, disclaimers, disclosures, or restrictions related to SAP Materials for general audiences.



© 2023 SAP SE or an SAP affiliate company. All rights reserved. See Legal Notice on www.sap.com/legal-notice for use terms, disclaimers, disclosures, or restrictions related to SAP Materials for general audiences.



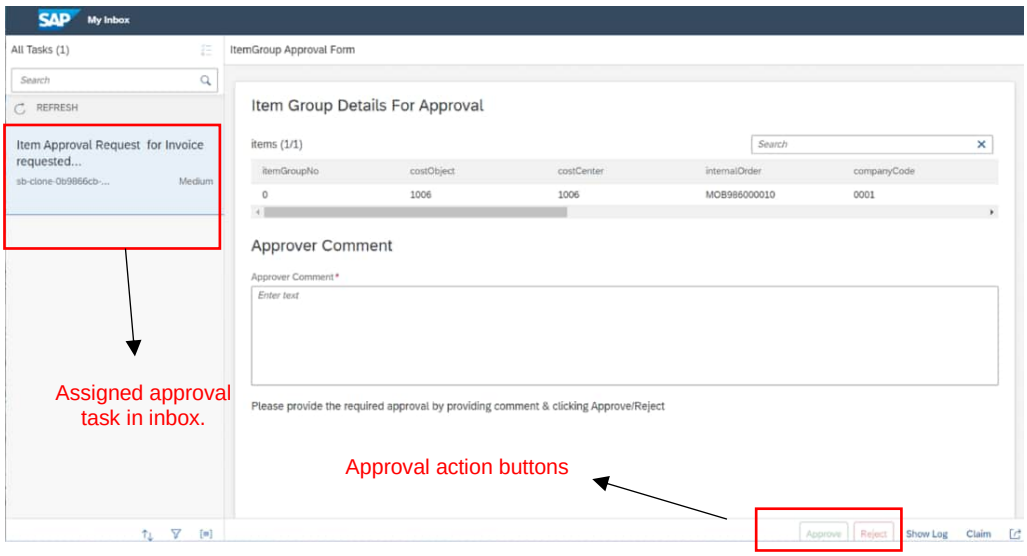


- On click of the 'Yes' button, the request will be submitted for approval. This will trigger an approval process and approver will be notified with the system generated email for approval task.
- After submitting the Non-PO Vendor Invoice, user will get following two options:

  Create Invoice: It will populate the Company Code and Currency from the last submitted Non-PO Vendor Invoice request and the user will be able to process next invoice.

  Display: It will populate a new screen with all the details of last submitted Non-PO Vendor Invoice request in a non-editable mode.
- On confirmation of the form Manage Non PO Vendor Invoice process gets triggered & based on invoice validation & decisions approval request is sent to the approver. This request is accessible through My Inbox of SAP build process account.

© 2023 SAP SE or an SAP affiliate company. All rights reserved. See Legal Notice on www.sap.com/legal-notice for use terms, disclaimers, disclosures, or restrictions related to SAP Materials for general audiences.



- The responsible approver to whom the request has been delegated can either Approve or Reject the request based on the invoice details. Approver can provide detailed comment for the action taken & same can be reviewed by the requester in case any correction needed on the submitted invoice request.
- After all approval request gets approved invoice is posted to ERP system, requester is notified with through mail with invoice number.

© 2023 SAP SE or an SAP affiliate company. All rights reserved. See Legal Notice on www.sap.com/legal-notice for use terms, disclaimers, disclosures, or restrictions related to SAP Materials for general audiences.

Dependencies

Technical Dependencies

The table below details the versions used to generate the package.

Component	Version
Desktop Agent	3.17.55
SDK Core	1.39.24
SDK Excel	1.39.24

Note: Automation will work with the version greater than above mentioned version

© 2023 SAP SE or an SAP affiliate company. All rights reserved. See Legal Notice on www.sap.com/legal-notice for use terms, disclaimers, disclosures, or restrictions related to SAP Materials for general audiences.

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 decision 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

© 2023 SAP SE or an SAP affiliate company. All rights reserved. See Legal Notice on www.sap.com/legal-notice for use terms, disclaimers, disclosures, or restrictions related to SAP Materials for general audiences.