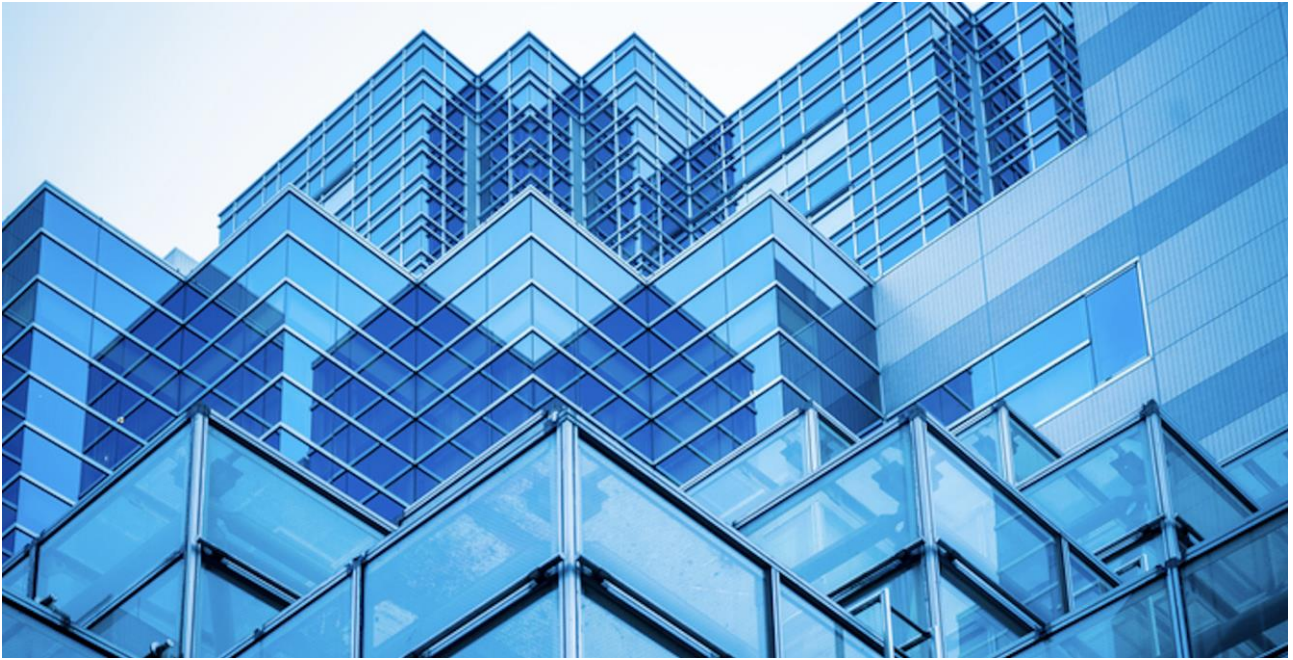




PUBLIC

SAP Build Process Automation

US Tax Exemption Certificates Management

Configuration and User Guide

Contents

Overview	3
Prerequisites	4
Procedure	5
Configuration Guide.....	5
Configuration on the local desktop	5
Setup SAP Business Technology Platform Cockpit.....	6
Configure Destination to Connect to SAP S/4HANA Private Cloud / On system 2023– Business Partner API	6
Configure Destination to Connect to SAP S/4HANA Private Cloud / On system 2023– Attachment API.....	7
User Roles Configuration	7
Additional Role Collection for Workflow Approver.....	8
SAP Build Process Automation	8
Import Content.....	8
Configure Process.....	8
Configure Action.....	9
Configure Forms.....	9
Configure Email	10
Configure Automation	11
Configure Decision	11
Release and Deploy the Process.....	12
Configure Scheduled Trigger.....	14
Mail Server Setup	15
User Guide.....	15
Capabilities	15
Support	17

This document contains 3 sections. Each section covers different information about this template content package.

1. **Overview:** In this section, you will get quick overview of the use case, what are high-level components used and how the template works in nutshell. Prerequisite section provides information of different services of SAP BTP that are required to use this template.
2. **Configuration Guide:** It contains sections which will guide you to setup your (a) *SAP BTP Account* with destination, cloud connector, user roles etc. (b) Import and configure the template *using SAP Build Process Automation* design studio and (c) *SAP Work Zone* to access the My Inbox or Task Center and other applications.
3. **User Guide:** This section provides details about different artefacts that are used in this template like process definition, decision diagram, action project details, forms, email notifications etc. to better understand how different capabilities are used in this template.

Note: Learning contents are published only for demo and reference purposes. We do not provide any support to learning / sample content.

Note: This documentation is not a detailed guide to setup SAP BTP services. It assumes that IT admin who is setting the content is skilled with SAP BTP environment. **Configuration section must be followed.**

Note: This template content is to accelerate your solution development. You must modify this template according to your requirements to achieve the desired business goal. To use this template content, you need to have basic knowledge and understanding of SAP Build Process Automation, SAP Integration Suite, and its capabilities.

Overview

This document provides technical information about what needs to be configured to make the package – US Tax Exemption Certificate Management process setup and run. The main audience of this document are technical IT/system administrators.

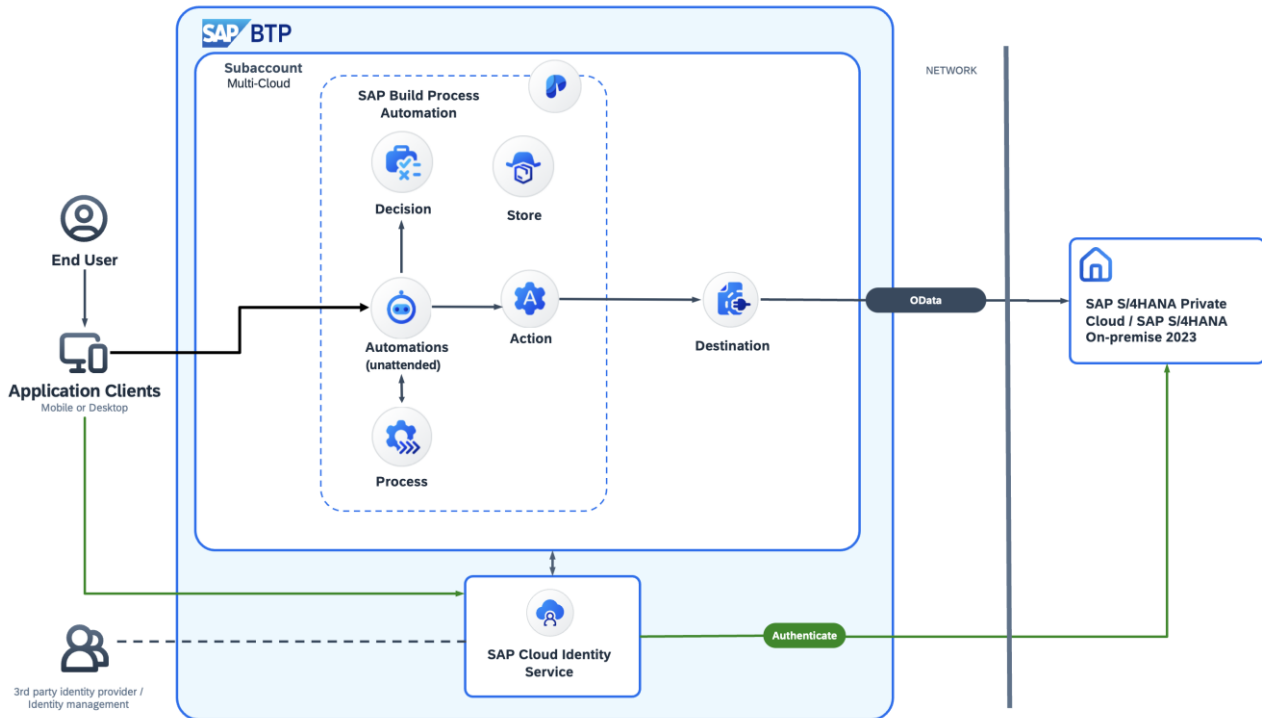
This package automates the US Tax exemption certificate management process allowing the tax managers to efficiently process the tax exemption requests from customers. It allows automatic scanning of email inbox to find any open tax exemption request, extract the information from tax exemption certificate, enrich it with the content from the SAP S/4HANA Private Cloud / On-premises release 2023, allows the tax managers to have a robust review process and finally update the exemption status in the SAP S/4HANA Private Cloud / On-premises system using APIs.

Features

- Automatic scanning of tax exemption certificate from designated email inbox in unattended mode. Acknowledge customer on receipt of the tax exemption request.
- Using SAP Document Information Extraction, extract the content from Tax Exemption certificates.
- Enrich the data with information from SAP S/4HANA Private Cloud / On-premises in unattended mode using REST APIs.
- Trigger a comprehensive review process and cater to most likely business scenarios.
- Ability to configure approver based on region and country.

- Inform the customer on the review decision.
- On approval, automatic update of tax exemption status in the SAP S/4HANA Private Cloud / On-premises system by REST API call.
- Attaching and linking the document with the SAP S/4HANA Private Cloud / On-premises system business object – Sales Area by making API Call.

Process Flow Diagram



Prerequisites

The following SAP Business Technology Platform services are required to consume **US Tax Exemption Management**.

- SAP Build Process Automation to orchestrate and automate the process.
- Microsoft Office Outlook with the designated folders for New / Processed folders for storing the tax exemption certificate emails.
- Microsoft Office Excel
- SAP Build Process Automation Desktop Agent.
- SAP S/4HANA Private Cloud / On-premises 2023 release
- Service user with authorization to change business partner and post attachment in business partner / sales area object (KNVV).
 - V_KNA1_VKO authorization object.
- API_BUSINESS_PARTNER_SRV and API_ATTACHEMENTS_SRV OData services must be activated in gateway system of the SAP S/4HANA.

Procedure

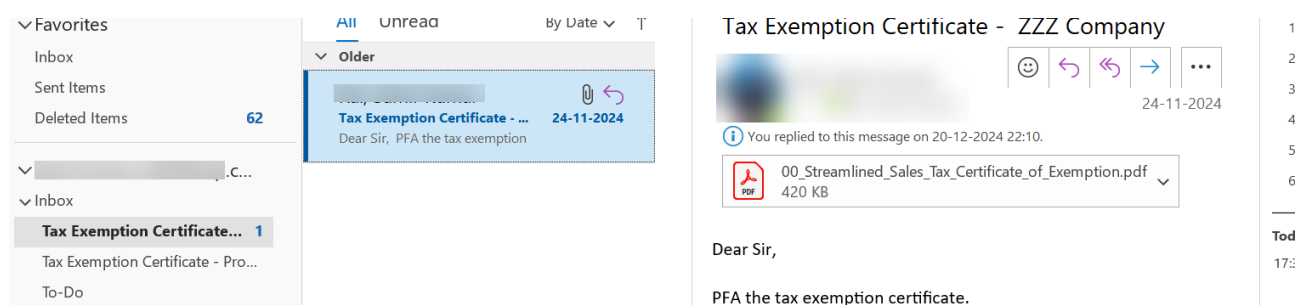
US Tax Exemption Management for SAP S/4HANA Private Cloud / On system 2023 release requires SAP Build Process Automation subscription.

1. Follow the guide to set up SAP Build Process Automation: [Prerequisites | SAP Build Process Automation | Initial Setup](#)

Configuration Guide

Configuration on the local desktop

- Create two new folders in the Inbox of Microsoft Outlook for storing the new and processed tax exemption email requests.
- Configure a rule in Outlook to route the new emails to the designated **new** folder. As well as the designated **Processed** folder, where the email requests are stored after getting processed by the automation. The folder structure in the Outlook may look like the below screenshot.



- Create three designated folders for – 1) Configuration file 2) Temporary folder for tax exemption certificate 3) Processed folder for tax exemption certificate.

☐ Name	Date modified	Type	Size
☐ Configuration Document		File folder	
☐ Processed		File folder	
☐ Temp		File folder	

Please note that the temp folder must not have any other document except the intended tax exemption certificate as it may cause error in the automation while extracting information from it.

- The excel **Configuration File** template can be found from the package documentation list. It has the following structure.

Configuration Item Name	Value
Name of the Organization	Your company name. This is required to add as signature.

The content of the file looks like the below screenshot.

You may protect the configuration file with a password to prevent unauthorized / unwanted edit. This password needs to be provided as an environmental variable to the automation.

- The accepted **tax exemption certificate formats** are available in the package for usage.

Setup SAP Business Technology Platform Cockpit

Configure Destination to Connect to SAP S/4HANA Private Cloud / On system 2023- Business Partner API

Destination Property	Value
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Name	S4HANA_<SID>_BusinessPartner
Type	HTTP
URL	http://<host>:<port>/sap/opu/odata/sap/API_BUSINESS_PARTNER
Proxy Type	Internet
Authentication	BasicAuthentication
User	Technical Service User of SAP S/4HANA Private Cloud / On system 2023 release
Password	Password of SAP S/4HANA Private Cloud / On system 2023 release
sap-client	Client ID of SAP S/4HANA Private Cloud / On system 2023 release

Configure Destination to Connect to SAP S/4HANA Private Cloud / On system 2023– Attachment API

Destination	Value
Name	S4HANA_<SID>_Attachments
Type	HTTP
URL	http://<host>:<port>/sap/opu/odata/sap/API_CV_ATTACHMENT_SRV
Proxy Type	Internet
Authentication	BasicAuthentication
User	Technical Service User of SAP S/4HANA Private Cloud / On system 2023 release
Password	Password of SAP S/4HANA Private Cloud / On system 2023 release
sap-client	Client ID of SAP S/4HANA Private Cloud / On system 2023 release

User Roles Configuration

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

Role Name	Purpose
ProcessAutomationDeveloper	Standard Business User, can model and publish processes.
TaskCenterAdmin	Permission to execute calls to the connector status API and monitor configured destinations and running background jobs.
ProcessAutomationParticipant	To execute (like accessing My Inbox, running the automations, etc.) this content package, you need to have this role assigned to the respective user.

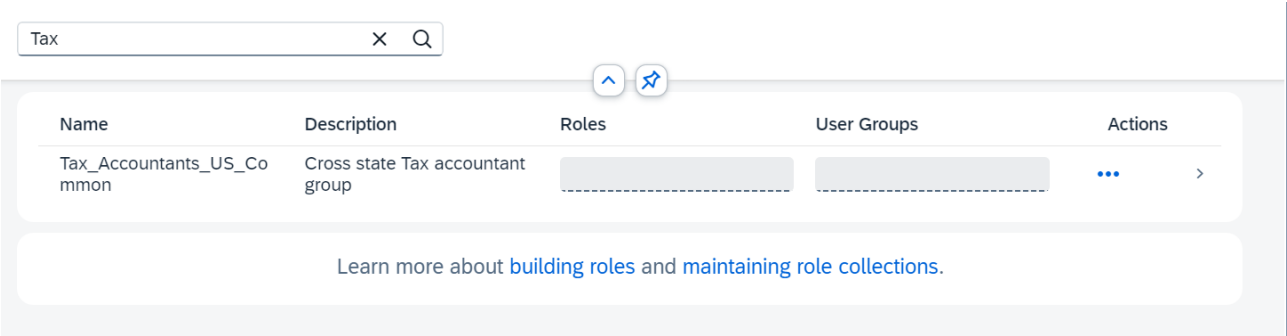
ProcessAutomationAdmin	To perform process admin activities like accessing monitoring applications etc., you need to have this role assigned to the respective user.
------------------------	--

For more information, please check followings:

- [SAP Build Process Automation roles](#)

Additional Role Collection for Workflow Approver

You can create role collection for workflow reviewer based on your requirement. Please check the Decision section for more details.



The created role collection can then be assigned to the business users who are going to review the tax exemption request workflow.

SAP Build Process Automation

In this section only describe the configuration of the artefacts.

Import Content

Standard automation packages released by SAP will be available at the store. To know more about the store visit [SAP Build Process Automation Store](#)

This template can be downloaded from the Store:

1. Navigate to the Store in your SAP Build Process Automation tenant.
2. Select the Project Type filter as “Business Process.”
3. In the Search bar type **“US Tax Exemption Certificate Management”**
4. Select the “Create from Template” button to add the template into your lobby.
5. After successfully adding the template, navigate back to the lobby to find the **“US Tax Exemption Certificate Management”** template available for use.

Configure Process

This package contains the process **“Tax Exemption Data Review”**, and it doesn’t need to be configured explicitly configured. It can be directly utilized after successful deployment.

Configure Action

This project requires the following two APIs of SAP S/4HANA Private Cloud / On system 2023 release added as action project. These APIs are available in <https://api.sap.com/>

API Name	Method	API Path	Purpose
API_BUSINESS_PARTNER	GET	/A_BusinessPartnerTaxNumber	Retrieves business partner tax number data.
API_BUSINESS_PARTNER	GET	/A_BusinessPartner('{BusinessPartner}')	Retrieves business partner data by using business partner number.
API_BUSINESS_PARTNER	GET	/A_BusinessPartner ('{BusinessPartner}') /to_BusinessPartnerAddress	Retrieves business partner address data.
API_BUSINESS_PARTNER	GET	/A_Customer('{Customer}') /to_CustomerSalesArea	Retrieves customer sales area data.
API_BUSINESS_PARTNER	GET	/A_CustomerSalesAreaTax(Customer='{Customer}', SalesOrganization='{Sales	Retrieves customer sales area tax data.
API_BUSINESS_PARTNER	PATCH	A_CustomerSalesAreaTax (Customer='{Customer}', SalesOrganization= '{SalesOrganization}', DistributionChannel= '{DistributionChannel}', Division='{Division}' ,DepartureCountry= '{DepartureCountry}', CustomerTaxCategory= '{CustomerTaxCategory}')	Update Tax Exemption Status
API_CV_ATTACHMENT_SRV	POST	/AttachmentContentSet	Post Attachment as Media

Configure Forms

This template contains the following forms:

1. **'Tax Exemption Review'** for presenting the enriched data to take informed decision.
2. **'Tax Exemption Review - Multiple Customers Found'** for presenting the list of customers determined based on the information in the tax exemption certificate.
3. **'Tax Exemption Status Update Error'** is used to inform the processor that the tax exemption status update fails due to unforeseen reasons.
4. **'Tax Exemption Request'** is used to input the tax exemption processing manually.

To edit a 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 snapshot shows the form with the necessary inputs to create a lead:

Tax Exemption Review

Please review the Tax Exemption Data and Approve to update the tax exemption status in S/4 HANA system. Reject / Fill the Exemption Form Manually If you do not agree with the following information and would like to cancel or handle it manually.

Information Extracted From Tax Exemption Certificate

Customer Name Address Tax ID Tax Exemption Certificate Path

Customer Information From S/4 HANA

Business Partner Number Customer Name Address

Sales Area Information from S/4 HANA

Sales Area Distribution Channel Division

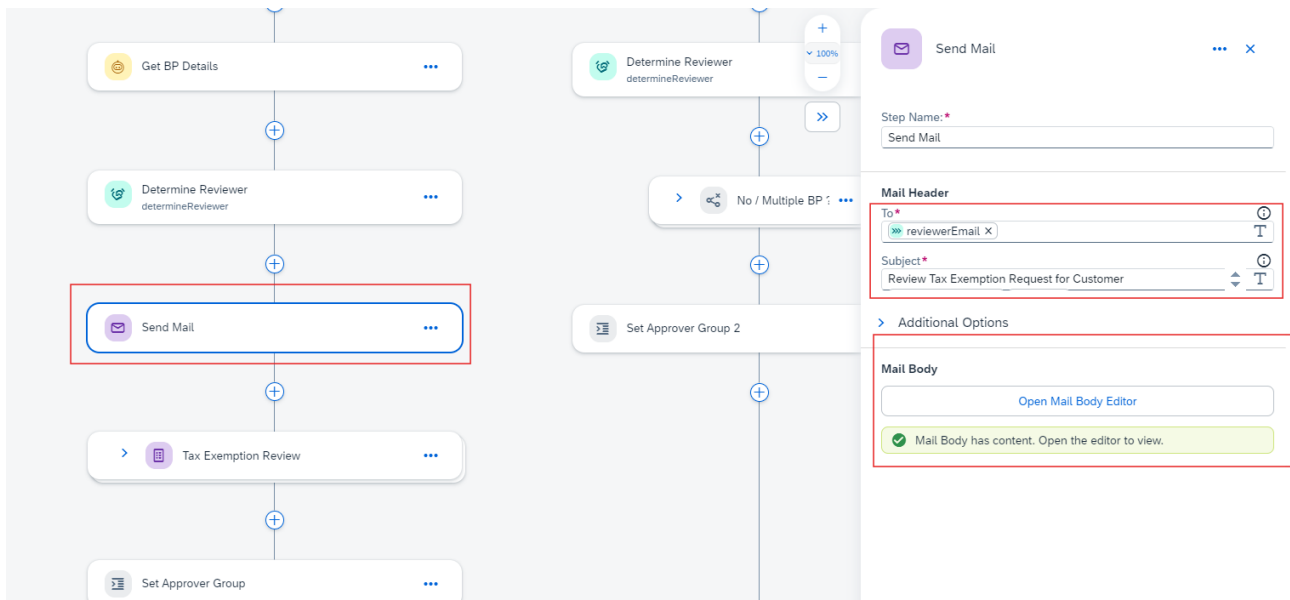
Sales Area Tax Information from S/4 HANA

Configure Email

Email notifications are sent to the reviewer informing that there's a notification item in their SAP MyInbox. 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.
- You may also add someone in CC.
- Click to **'Open Mail Body Editor'**.



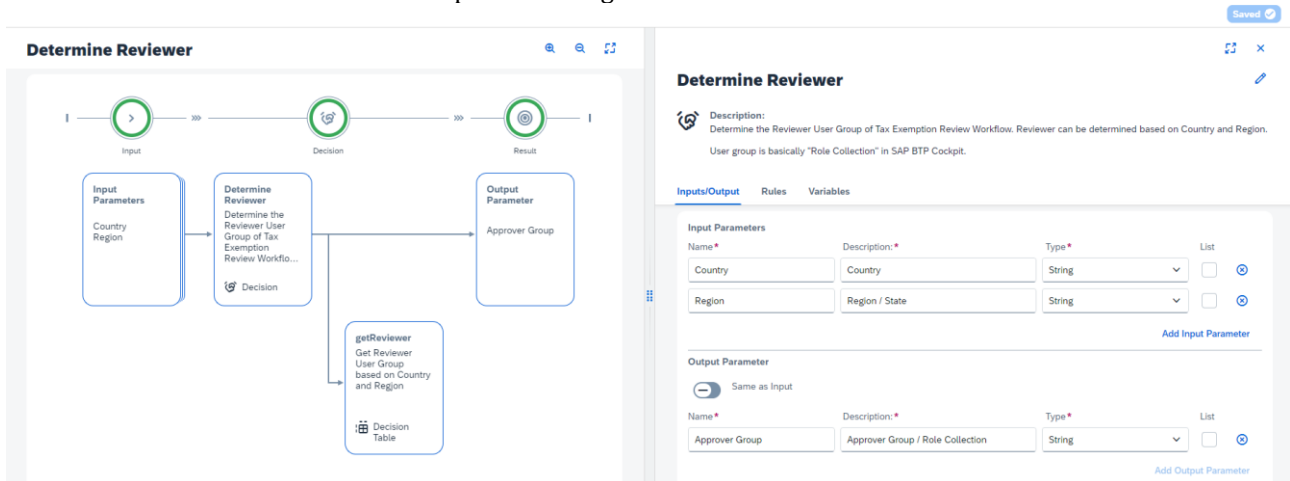
Configure Automation

The automations in the project doesn't require any explicit configuration except setting up the configuration file and environment variables as discussed in the sections above.

Configure Decision

There's one decision needs to be configured **"Determine Reviewer"**. To modify the decision:

- In process editor, double click to open the decision.
- Select the rule from the decision diagram.
- Edit the rule to add more rows or update existing values.



Here's how the decision table is configured.

Saved

getReviewer

✎ 📄 Export 📄 Import 🗑

General Information:

Status: Draft

Hit Policy: FIRST MATCH

Description:

Get Reviewer User Group based on Country and Region

⬆ ⬇

Decision Table
Add Row Delete Row Copy Row Cut Row Paste Row

	If	Then
☐	Country EXISTSIN	Region EXISTSIN
☐	['US' , " , 'XX']	Approver Group 'Tax_Accountants_US_Common'

The approver group can be added from previous steps - **Create Role collection**.

Release and Deploy the Process

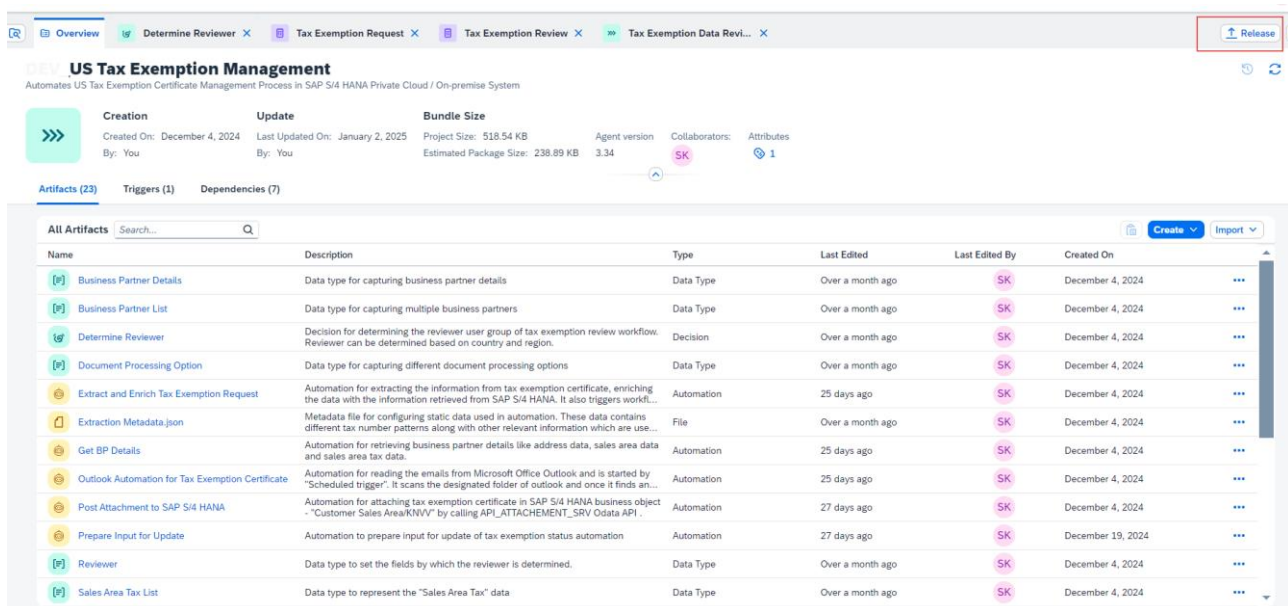
After configuring your process, it's time to publish, test and run it. To run a process, you must first release and deploy it.

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

To release a version of your process:

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

Then click 'Release'.



For more information please visit: [SAP Build Process Automation](#)

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

Import Destination

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

To configure destination,

- Click on **Control Tower**.
- Select **Destinations** from the right panel.
- Click **Add**

Select the destinations created in the setup section to be added.

For more information and screen shots, please refer to the below link: [Manage Destinations](#)

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

To deploy a released version of your process,

First ensure that the status is listed as 'Released'.

Then click '**Deploy**'. You can select the environment where the project to be deployed, then set the environmental variables. The following environment variables are required for this project.

Environment Variable	Type	Description
configFilePassword	Password	Password to Open configuration file.
configurationFilePath	String	File path of the configuration file. Refer to the local desktop application setup section
S4_Attachment	Destination	The destination we created for API_Attachement_SRV to post attachment to SAP S/4HANA Private Cloud / On system 2023 release
S4_BP_Tax_Update	Destination	The destination we created for API_BUSINESS_PARTNER_SRV to get details of

		business partner and change tax exemption status in business partner.
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Attribute – Since the automation will be executed by a scheduled triggers and uses the local desktop specific data, it's recommended to use the agent attribute and map it to the project to prevent the automation job from being distributed to other unattended agents.

For more details, please refer to the [help documentation](#).

Configure Scheduled Trigger

Since the process starts automatically by periodically scanning the designated inbox folder in Microsoft Outlook, a scheduled automation trigger shall be configured.

For detailed step on adding the scheduled automation trigger, please refer to the [help documentation](#).

Mail Server Setup

It's required to setup the mail sever in SAP Build Process automation. Please follow the [help documentation](#).

User Guide

Capabilities

This template consists of following capabilities.
Please refer [help documentation](#) about these different artifacts.

Type	Name	Description
Process	Tax Exemption Data Review	This process orchestrates the tax exemption review
Automation	Outlook Automation for Tax Exemption Certificate	This automation is started by "Scheduled trigger". It scans the designated folder of Outlook and once it finds an email containing attachment and tax exemption certificate it reads it and saves the attachment in the configured temporary folder. It then invokes another automation to take next steps.
Automation	Extract and Enrich Tax Exemption Request	This automation is triggered by "Outlook automation". It extracts the information from Tax exemption certificate, Enriches the data with the information retrieved from SAP S/4HANA. It also triggers workflow for review of tax exemption information.
Automation	Get BP Details	This automation is used to retrieve Business partner details like address data, Sales area data and sales area tax data.
Automation	Update BP Tax Exemption Status	This Automation is called once the tax exemption request is approved and it sets the tax exemption status in Business Partner Customer Sales Area in SAP S/4HANA Private Cloud / On system 2023 release system using API_BUSINESS_PARTNER_SRV.
Automation	Post Attachment to SAP S/4HANA	This automation attaches the Tax exemption certificate as attachment in the SAP S/4HANA Private Cloud / On system 2023 release business object - "Customer

		Sales Area/KNVV" by calling API_ATTACHEMENT_SRV OData API.
Automation	Send Email	This automaton is used to send email to update the customer on the decision of tax exemption request.
File	Extraction Metadata	Metadata file contains different tax number patterns along with other relevant information which are used later in the automation.
Decision	Determine Reviewer	Determine the reviewer User group of tax exemption review workflow. Reviewer can be determined based on country and region. User group is basically "Role Collection" in SAP BTP cockpit.
Form	Review Tax Exemption Data	This Form presents the tax exemption data - both extracted from the received certificate and retrieved from SAP S/4HANA Private Cloud / On system 2023 release system to the reviewer and facilitates the reviewer to take appropriate decision.
Form	Error Notification	Error notification is sent to the processor when automatic update of tax exemption status fails in API call due to unforeseen reasons.
Form	Manual Tax Exemption Request	Manual form for tax exemption request submission
Form	Tax Exemption Review	This form presents the data to review tax exemption data extracted from certificate and enriched with the data from SAP S/4HANA Private Cloud / On system 2023 release system.
Form	Tax Exemption Review - Multiple Customers Found	This form is triggered when multiple business partners are retrieved from SAP S/4HANA Private Cloud / On system 2023 release system based on the data from tax exemption certificate.
Data Type	Business partner details	Datatype for capturing Business partner details
Data Type	Business partner list	Datatype for capturing multiple Business partners
Data Type	Document Processing Option	Datatype for capturing different document processing options
Data Type	Reviewer	Reviewer data type is used to set the fields by which the reviewer is determined.
Data Type	Sales Area Tax List	This data type is the list of the fields required to represent the "Sales Area Tax" data
Data Type	Tax Review Form Data Type	This is the data type to trigger tax exemption review process.

Data Type	UniformUSTaxExemptionCertificateSchemaDT	Data Type for Document Information Extraction Schema
Document Template	StreamlinedUSTaxExemptionCertificateTemplate	Streamlined / common multijurisdictional US tax exemption certificate template
Document Template	UniformTaxExemptionCertificateTemplate	Uniform template - US tax exemption certificate (Multijurisdictional)

Support

There is no support available for template content. If you experience general issues with SAP Build Process Automation, please follow the links below:

- [Troubleshoot Support Guided Answer](#)
- [Test an Automation Help portal Article](#)
- [Test an Application Help portal Article](#)
- [Get traces Support Guided Answer](#)

If the issue persists, please raise an incident via SAP Support Portal on **BPI-PA-BPC** component.

This template can be modified using SAP Process Automation. For example: add 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.

