



PUBLIC

SAP Best Practices for Intelligent Automation for SAP Business One

## **Return Request Process Automation**

Technical Specification

THE BEST RUN



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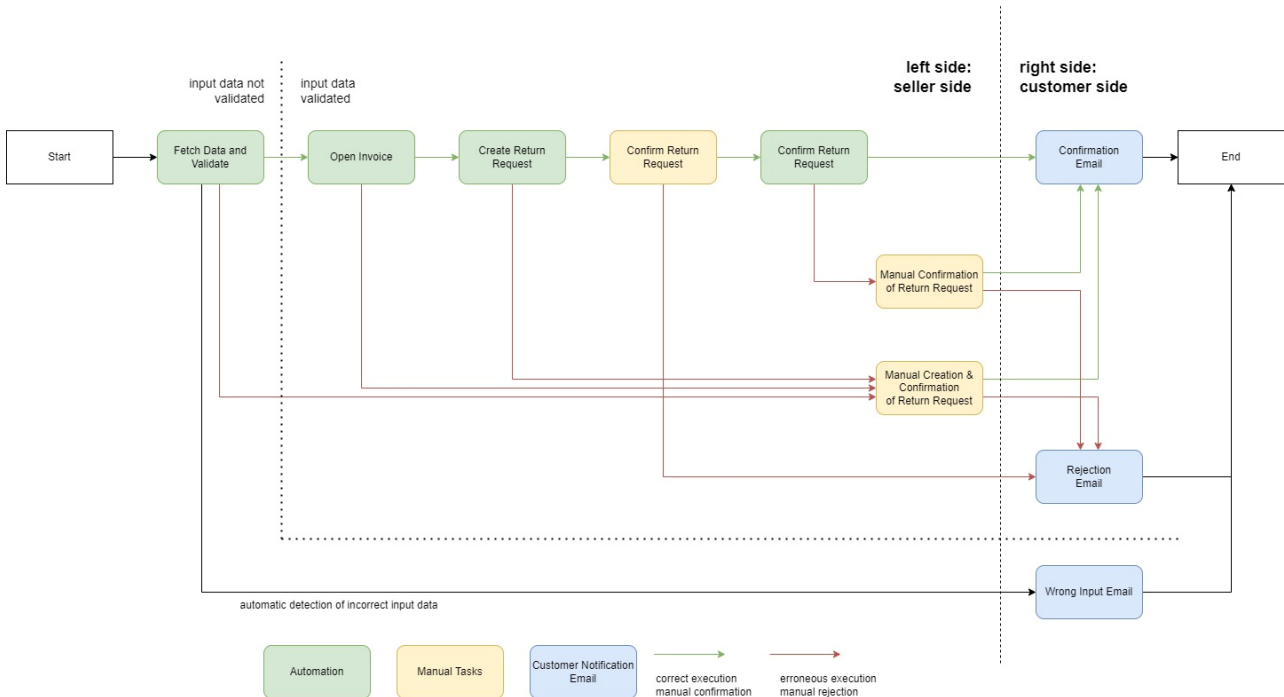
## TECHNICAL OVERVIEW

The **Return Request** process automation is an SAP Business One best practice project template for SAP Build Process Automation. This process automates the creation of a return request by the supplier (a seller) after a return is initiated by the customer. The automation is triggered with an API call that receives the return request data.

A summary of the automation process is as follows:

1. The customer (“requestor”) initiates the return request via an external online form, which calls the SAP Build Process Automation API.
2. The system validates the data provided by the requestor with SAP Business One data.
3. If the validation does not identify any errors, the return request is automatically created based on the A/R invoice, and the seller (“processor”, an SAP Business One user) receives an e-mail notification to confirm the task in SAP Build Process Automation.
4. If the validation identifies an error, an e-mail notification is sent to the processor with the following options:
  - Create the return request manually and then confirm or reject the request.
  - Directly reject the return request without creating the return request. If the processor rejects the return request, an e-mail is sent to the requestor with the reason for the rejection.
5. If the processor confirms the return request, an e-mail notification indicating that the product can be returned is sent to the requestor. In Web Client for SAP Business One, on the **Logistic** tab of the return request record, the status of the **Confirmed** field is changed to “Yes”. The return request is linked to the A/R invoice, and both documents are updated with the new data.

## WORKFLOW



## PREREQUISITES

- **Windows Credentials**

You have added a generic credential in Windows Credential Manager for user authentication to SAP Business One by the automation process. The generic credential needs to be added on the machine on which the Desktop Agent will run the automation process. You will need to enter the name of the credential as an environmental variable when running the automation process. For more information, see [Setting Up Windows Generic Credentials](#) in the online help for SAP Business One on [SAP Help Portal](#).

- **SAP Business One Authorizations**

In SAP Business One, in the **General Authorizations** window (**Administration** → **System Initialization** → **Authorizations** → **General Authorizations**), the processor has full authorization to **Return Requests** and **Document Confirmation**.

- **SAP Build Process Automation**

- **Subscription**

You have subscribed to the SAP Build Process Automation service in the SAP Business Technology Platform (BTP). For more information, see [Subscribing to SAP Build Process Automation](#) in the application help for SAP Build Process Automation on [SAP Help Portal](#) (EN only).

- **Desktop Agent**

You have installed the Desktop Agent on your local machine. For more information, see [Install Desktop Agent to Run Automations](#) in the application help for SAP Build Process Automation on [SAP Help Portal](#) (EN only).

- **SAP Business Technology Platform (BTP)**

- **Users and Role Collections**

In the SAP BTP Cockpit of SAP Business Technology Platform (BTP), the processor is defined as a user in the subaccount which has a subscription to SAP Build Process Automation. The processor has been assigned to the role collection **ProcessParticipant** or **ProcessAutomationParticipant**. For more information, see [Assigning Users to a Role Collections](#) in the online help for SAP Business One on [SAP Help Portal](#).

## SETUP


1. **Acquire the Process Automation Project**

Search for the **Return Request Process Automation** project in the [SAP Intelligent RPA Store](#) and add the project. You can also find the project in SAP Build Process Automation on the **Store** tab. For more information, see [Acquiring a Project Template from the SAP Build Process Automation Store](#) in the online help for SAP Business One on [SAP Help Portal](#).

2. **Deploy the Project Without a Trigger**

In SAP Build Process Automation, deploy the project without a trigger. Refer to Table 1 below for a description of the environment variables that are required for running the process. For more information about this step, see [Deploying an Automation Project Without a Trigger](#) in the online help for SAP Business One on [SAP Help Portal](#).

**TABLE 1: Input Variables**

Variable Name	Type	Sample Value	Description
ProcessorBTPUserID		my.e-mail@company.com, MyUserName	The user name of the processor in BTP. This user will receive the tasks in the <b>My Inbox</b> app.
BusinessOneDBName	Text	SBODemoUS	The name of the SAP Business One database you want to connect to.
WindowsCredentialsName	Text	B1manager	The name you provided for the credentials you set in Windows Credential Manager (in the <i>Internet or network address</i> field). Note that the credentials information needs to be set as the SAP Business One user name and password.
BusinessOneURL	Text	(https://<IPaddress>:<port>) https://12.34.567.899:50000	The IP address of the server that hosts the SAP Business One tenant. This is the address of the SAP Business One Service Layer to be accessed by the process. The '50000' appended to the URL is the standard Service Layer port for SAP Business One; this value may differ depending on your configuration.
ProcessorFullName	Text	Joana Oliveria	The full name of the processor.
ProcessorE-mailAddress	Text	joana.oliveria@company.com	The processor's e-mail address at which they would like to receive e-mail notifications.
LinkToMyInbox	Text	https://mySPAtenant.sap-process-automation.cfapps.sap.hana.ondemand.com/	To get the link to your Inbox, in SAP Build Process Automation, click  , the icon for the My Inbox app, and copy the URL.

### 3. Register and Add the Desktop Agent

Register the Desktop Agent and add the agent to SAP Build Process Automation. For more information, see [Registering and Adding an Agent](#) in the online help for SAP Business One on the [SAP Help Portal](#).

### 4. Configure the SMTP E-mail Destination

To send e-mail notifications to requesters on status changes in deployed projects, you need to configure an SAP BTP e-mail destination for SAP Build Process Automation. For more information

about how to configure the e-mail destination, see [Configuring the SMTP E-mail Destination](#) in the online help for SAP Business One on the [SAP Help Portal](#).

## 5. Add Alert Handlers

Alert handlers enable SAP Build Process Automation to send e-mail notifications for the alerts used in a deployed process. The alert handler allows suppliers to customize the e-mail notifications sent to their customers. The following alerts can be triggered in the **Return Request** process automation:

- **Return\_Request\_Requestor\_Confirmation**  
This alert is triggered if the return request is approved. Adding an alert handler for this alert sends a confirmation e-mail to the requestor.
- **Return\_Request\_Requestor\_Rejection**  
This alert is triggered if the return request is rejected. Adding an alert handler for this alert sends a rejection e-mail to the requestor.
- **Return\_Request\_Requestor\_WrongData**  
This alert is triggered if the return request contains incorrect data. Adding an alert handler for this alert sends a notification e-mail to the requestor, indicating that the return request data did not match the data in the seller's system.

For more information on how to add alert handlers, see [Adding Alert Handlers](#) in the online help for SAP Business One on the [SAP Help Portal](#).

See **Appendix 1** for sample content for the e-mail notifications in the alert handlers.

**Note:** In the custom e-mails for the alert handlers, you need to use the variable “`#{alert.parameters.requestor_e-mail}`” for the recipient.

## 6. Set Up a Service Key

To use an API call to trigger the process, you need a service instance with a service key in your subaccount to authenticate to the SAP BTP. In the SAP BTP Cockpit, create a service instance (if not already available) and a service key. For more information, see [Setting Up a Service Key](#) in the online help for SAP Business One on the [SAP Help Portal](#).

## TEST THE WORKFLOW

Before starting the process for productive use, we recommend that you test the workflow using a JSON payload in SAP Build Process Automation before the external API is available.

### Procedure

1. In SAP Build Process Automation, choose the **Monitor** tab.
2. In the left panel, choose **Manage** and **Processes and Workflows**.
3. Select the return request process automation.
4. Choose the **Start New Instance** button.
5. In the **Start New Instances** dialog box, enter the JSON payload with the inputs defined for the process. You can find a description of the inputs defined for the process in Table 2, and an example JSON payload below.

**Table 2: Process Inputs**

Variable Name	Identifier	Type	Sample Value	Description
A/R Invoice Number	arInvoice	Text	1046	The A/R invoice number for which a return request is to be created.

Variable Name	Identifier	Type	Sample Value	Description
Free Text Return All	freeTextReturnAll	Text	My free text if all items are to be returned.	If all items are to be returned, the return reason free text will be displayed in each item line.
Items to Return	itemsToReturn	Text	{\ItemCode\": \"I00008\", \"Quantity\": 1, \"ReturnReason\": 1, \"FreeText\": \"My return reason\"}, {...}]	If specific items are to be returned, define the items in this object list. If you return all items in the specified invoice, send an empty list.
Posting Date	postingDate	Text	2021-08-03	The posting date of the specified A/R invoice. The date needs to follow the <a href="#">ISO 8601</a> format ( YYYY-MM-DD).
Reason Return All	reasonReturnAll	Number	1	If you return all items in the specified invoice, this is the return reason specified in the ORER table of SAP Business One that will be displayed in all line items.
Return All	returnAll	Boolean	true	If you want to return all items of the specified invoice, set this value to "true". In this case, <i>itemsToReturn</i> does not need to be specified (send an empty list).
Requestor E-mail	requestorE-mail	Text	"requestor.e-mail@company.com"	E-mail of the requestor who is requesting the return on behalf of the customer.
Requestor Name	requestorName	Text	Thomas Schmidt	Name of the requestor who is requesting this return on behalf of the customer.

### Example JSON Payload

```
{
  "arInvoice": "1046",
  "itemsToReturn": "[{\ItemCode\": \"I00008\", \"Quantity\": 1, \"ReturnReason\": 1, \"FreeText\": \"My return reason\"}]\"",
  "postingDate": "2021-08-03",
  "returnAll": false,
  "reasonReturnAll": "Damaged",
  "freeTextReturnAll": "My free text if all items are to be returned.",
  "requestorE-mail": "tomas.schmidt@company.com",
  "requestorName": "Tomas Schmidt"
}
```

6. Choose the **Start New Instance and Close** button.
7. To view the details of the instance, in the **Monitor** section of the left panel, choose **Processes and Workflows**, then select your instance.

8. In the **Context** area, you can check the values associated with the instance. The **Execution Log** area lists the steps that the process has run.

## API TRIGGER

In productive use, the process is started by an API trigger when a request form is submitted. An API trigger opens a dedicated endpoint that allows an external application to start the automation in a specified deployed project using an HTTP POST call.

### Prerequisites

- The supplier has created a web form that collects the required return request information from the customer.
- The requestor on the customer side is authenticated before entering data in the web form.

### Procedure

1. In SAP Build Process Automation, choose the **Monitor** tab.
2. Click **Manage** in the left panel and click **Automations**.
3. Choose the **Add Trigger** button.
4. In the **Create Trigger** dialog, select the process automation from the list and choose the **Next** button.
5. Select the **API** radio button as the trigger type.
6. Choose a name and a description (optional) for your trigger.
7. Select the priority for the trigger.
8. Select the expiration time of jobs created by the trigger in minutes, hours, days, or weeks (**Jobs expire after**), and then click **Next**.  
**Note:** The maximum expiration time is 30 days or 4 weeks. Once the expiration time is passed, the trigger appears in **Expired** status.
9. **Optional:** Define the **Agent Attributes** which will define which agents the job is distributed to.
10. Choose the **Confirm** button, and then choose the **Deploy** button.

## VALIDATIONS

### Customer Data Validation

Data from the requestor is validated by the automation to ensure that it is in a valid format for the automation and is consistent with the supplier's data in their system.

The customer requesting to return a product needs to enter valid inputs for the following data:

- Invoice number
- Invoice posting date
- Item number and quantity (or return all)
- Return reason

### Return Request Validation

When generating the return request, the validation checks the following data:

- The invoice number exists in the system.
- The invoice is not a reserve invoice.
- The invoice posting date in the return request is the same as in the system.
- A specified item appears in the document only once.
- A closed invoice can be reopened.
- The specified item and quantity are correct.



## TASKS AND E-MAIL NOTIFICATIONS

If the automation does not detect any validation errors, the return request is automatically created. An e-mail notification is sent to the processor with a link to confirm (or reject) the task in the **My Inbox** app. The task also includes a link to open the related return request document directly in Web Client for SAP Business One.

If the validation identifies one or more validation errors, or there is a technical reason for the failure, the return request is not created. An e-mail notification is sent to the processor with a link to open the task in the **My Inbox** app. Depending on the reason for the error, the processor can choose from one of the following options:

- **Create Return Request Manually**

The processor creates the return request manually in SAP Business One. The processor then either confirms or rejects the return. If the processor confirms the return, a confirmation e-mail is sent to the requester.

- **Reject**

The processor rejects the return and enters a reason for the rejection, which is sent in an e-mail to the requestor.

## MONITORING

To view the details of a current instance of the process, in the **Monitor** section of the left panel, click **Processes and Workflows**, then select the instance of the process that you want to monitor. In the **Context** area, you can check the variables and values associated with the instance. The steps that the process has run are provided in the **Execution Log**.

## RESULT

In SAP Business One, the status of the return request is set as **Confirmed**, and the return request is linked to the A/R invoice.

## SOFTWARE REQUIREMENTS

- SAP Build Process Automation. For more information, see [Subscribing to SAP Build Process Automation](#) in the application help for SAP Build Process Automation on [SAP Help Portal](#) (EN only).
- Desktop Agent 2.0.20 or higher. For more information, see [Install Desktop Agent to Run Automations](#) in the application help for SAP Build Process Automation on [SAP Help Portal](#) (EN only).

## CONSTRAINTS

- This process automation can only work on a Microsoft Windows operating system.

## SECURITY

Certain configuration scenarios require a technical user. In such cases, every natural person needs a separate technical user (for example, a separate communication arrangement). The user should not share their credentials with any other natural person.

For security-relevant information that applies to SAP Build Process Automation, see [Security](#) in the application help for SAP Build Process Automation on [SAP Help Portal](#) (EN only).

## APPENDIX 1

### Sample Content for E-mail Notifications

#### Confirmation

DEAR \${ALERT.PARAMETERS.REQUESTOR\_NAME},

WE ARE HAPPY TO INFORM YOU THAT YOUR RETURN REQUEST FOR A/R INVOICE  
\${ALERT.PARAMETERS.AR\_INVOICE\_NUMBER} FROM \${ALERT.PARAMETERS.POSTING\_DATE} HAS BEEN  
CONFIRMED. WE ARE AWAITING THE RETURN OF THE ITEMS.

WITH KIND REGARDS,

\${ALERT.PARAMETERS.PROCESSOR\_NAME}  
\${ALERT.PARAMETERS.PROCESSOR\_EMAIL}

#### Rejection

DEAR \${ALERT.PARAMETERS.REQUESTOR\_NAME},

WE ARE SORRY TO INFORM YOU THAT YOUR RETURN REQUEST FOR A/R INVOICE  
\${ALERT.PARAMETERS.AR\_INVOICE\_NUMBER} FROM \${ALERT.PARAMETERS.POSTING\_DATE} HAS BEEN  
REJECTED.  
\${ALERT.PARAMETERS.REJECTION\_NOTE}

WITH KIND REGARDS,

\${ALERT.PARAMETERS.PROCESSOR\_NAME}  
\${ALERT.PARAMETERS.PROCESSOR\_EMAIL}

#### Wrong Data

DEAR \${ALERT.PARAMETERS.REQUESTOR\_NAME},

WE ARE SORRY TO INFORM YOU THAT WE WERE UNABLE TO PROCESS YOUR RETURN REQUEST FOR A/R  
INVOICE \${ALERT.PARAMETERS.AR\_INVOICE\_NUMBER} FROM \${ALERT.PARAMETERS.POSTING\_DATE} AS THE  
DATA YOU PROVIDED IS NOT CONSISTENT WITH THE ONE IN OUR SYSTEMS. PLEASE CONTACT US DIRECTLY  
VIA BELOW E-MAIL ADDRESS. THANK YOU!

WITH KIND REGARDS,

\${ALERT.PARAMETERS.PROCESSOR\_NAME}  
\${ALERT.PARAMETERS.PROCESSOR\_EMAIL}

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