

SAP BUSINESS TECHNOLOGY PLATFORM | EXTERNAL

# Setup & Configuration

Purchase Requisition Approval and Release in SAP ERP using SAP Workflow Management or SAP Build Process Automation

THE BEST RUN 

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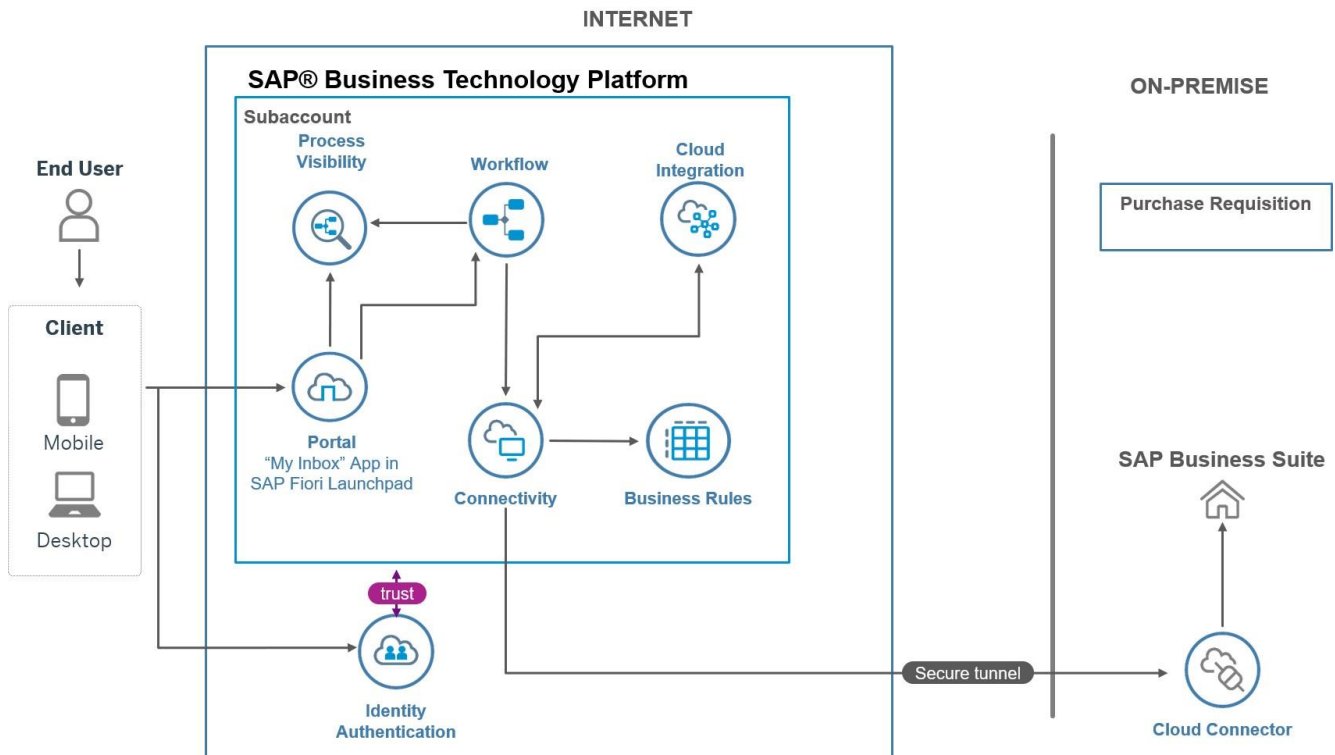
# Overview

This document provides information about configuration steps to consume the Live Process Package Purchase Requisition Approval and Release. The main audience of this document are technical IT Administrators and Developers.

This content package enables SAP ERP customers to automate Purchase Request approval and release process using SAP Workflow Management or SAP Build Process Automation without additional development in SAP ERP. Salient features of this content package are

- Plug and Play with SAP ERP without additional development.
- Process steps are delivered to create net new variants.
- New Process variants can be configured in a low code no code approach.
- Agent determination using Business Rules or SAP ERP or external systems.
- Validation of Line-item attributes using Business Rules.
- Process visibility and key process performance indicators out of the box.
- Insight to actions using process visibility.
- Business Rules to provide flexibility in determining workflow templates and approvers
- Integration content to call SAP ERP BAPIs from SAP Workflow Management.

## SAP ERP – Purchase Requisition Approval & Release



Purchase Requisition Approval and Release Process enable customers to automate approval and release of Line Items in a flexible and transparent way. It provides flexibility in choosing process variants depending on attributes like Request date, Price, Material Group, Document Type, Plant, Purchasing Group and Purchasing Organization etc. When a requestor creates a Purchase Request

with line items in SAP ERP, pre-configured Process Variants are triggered in SAP Workflow Management or SAP Build Process Automation.

- Line-Item data gets validated using Business Rules before approval.
- Approvers are determined using a Business Rule / external system.
- Approvers are notified via email.
- Approvers have two decision options (Approve, Reject), and based on the decision, the next approval step will be created or requested for a rework or delete the line item and terminate the approval process.
- Line Item released in SAP ERP for Purchase Order creation.

SAP Build Process Automation or SAP Workflow Management shall not be used to store or process sensitive personal data. This service can be used if you have a legal ground to process personal data.

## Required SAP BTP Services

The following SAP Business Technology Platform services are required to consume the content package Purchase Requisition Approval and Release:

- SAP Workflow management

- SAP Integration Suite

- SAP Cloud Portal service / SAP Launchpad service

- SAP Cloud Connector

- SAP Cloud Identity Services - Identity Authentication (optional)

- SAP Business Application Studio to modify/deploy the SAPUI5 applications.

This content package requires SAP ERP 6.0 as the back-end application.

# Setup and Configuration

The **Procure to Order** content package requires SAP Build Process Automation or SAP Workflow Management subscription or a CPEA contract. Based on which service you plan to use, follow the appropriate section to configure either SAP Build Process Automation or SAP Workflow Management

## Configure SAP Build Process Automation

Follow the setup and configuration section of SAP Build Process Automation:

1. [Subscribe to SAP Build Process Automation \(Standard Plan\)](#)
2. [Configure Destinations for Live Process Projects](#)
  - a. Import Package Destination
  - b. Business Rules Destination to support start and step conditions
3. [Optional] [Configure SAP Launchpad Service for SAP Build Process Automation](#)

### Configure Process Automation Destination

A HTTP destination is required in the BTP subaccount where SAP Build Process Automation is subscribed. Create a destination with name “sap\_process\_automation\_service” with the following configuration if it doesn’t exist already. Please refer how to [create a HTTP destination](#) OAuth 2.0 Authentication (client credentials).

Name	sap_process_automation_service
Type	HTTP
Proxy Type	Internet
Authentication	OAuth2ClientCredentias
URL	<"endpoints"."api">
Client ID	<"uaa":"clientis">
Client Secret	<"uaa":"clientsecret">
Token Service URL	<"uaa":"url"/>/oauth/token

Note: While creating the service instance for SAP Build Process Automation service, make sure that at least the required scopes are assigned (help documentation to enable technical authentication to [access the SAP Build Process Automation APIs](#)). If the scopes are not assigned, you can also [update the service instance](#) with the required scopes.

### Configure OAuth2ClientCredentias SAP Build Process Automation Destination (Service Instance)

Ignore this step if there is already a destination using SAP Build Process Automation service instance created.

Create new destination to call SAP Build Process Automation APIs using a service route from SAP UI5 component. For more details, follow the help document:

<https://help.sap.com/viewer/cca91383641e40ffbe03bdc78f00f681/Cloud/en-US/685f383cebb54c009b2fac633b32c90f.html>.

Destination Configuration Blank Template Service Instance

Service Instance: \*

Name: \*

Description:

Additional Properties New Property

Next Cancel

Destination Configuration

Name: \*

Type:

Description:

URL: \*

Proxy Type:

Authentication:

Use mTLS for token retrieval

Client ID: \*

Client Secret:

Token Service URL Type: \*

Token Service URL: \*

Token Service User:

Token Service Password:

Additional Properties

endpoints	{ "api": "https://..." }	<input type="checkbox"/>
html5-apps...	{ "app_host_id": "..."	<input type="checkbox"/>
saasregistry...	true	<input type="checkbox"/>
sap.cloud.s...	com.sap.spa.process...	<input type="checkbox"/>
sap.cloud.s...	spa	<input type="checkbox"/>

Use default JDK truststore

Save Cancel

## Configure SAP Workflow Management

Follow the [setup and configuration section](#) of SAP Workflow Management.

Note: While creating the service instance for Workflow service, make sure that at least the following scopes are assigned (help documentation to [enable technical authentication](#) to access the workflow APIs). If the scopes are not assigned, you can also [update the service instance](#) with the following scopes.

- WORKFLOW\_INSTANCE\_GET
- WORKFLOW\_INSTANCE\_START
- WORKFLOW\_INSTANCE\_CANCEL

### Configure Workflow Email Destination

Configure bpmworkflowruntime\_mail destination. For more information on configuring destination, see [configure workflow email destination](#).

### Configure Workflow OAuth Destination

Configure bpmworkflowruntimeoauth destination. For more information on configuring destination, see [configure oauth destination](#).

## Configure OAuth2ClientCredentials Workflow Destination

Configure a destination with the following parameters:

Name	Workflow
Type	HTTP
Proxy Type	Internet
Authentication	OAuth2ClientCredentias
URL	https://api.workflow.<region-host>.hana.ondemand.com/workflow-service/rest
Client ID	
Client Secret	
Token Service URL	<"uaa":"url"/>/oauth/token
Additional Properties:	Name: bpmprocessvisibility.triggerWorkflow Value: system

While creating the service instance for Workflow service, make sure that at least the following scopes are assigned (help documentation to enable technical authentication to access the workflow APIs). If the scopes are not assigned, you can also update the service instance with the following scopes.

WORKFLOW\_INSTANCE\_GET, WORKFLOW\_INSTANCE\_START, WORKFLOW\_INSTANCE\_GET\_CONTEXT,  
WORKFLOW\_INSTANCE\_GET\_EXECUTION\_LOGS,  
WORKFLOW\_INSTANCE\_GET\_ERROR\_MESSAGES, MESSAGE\_SEND



Please refer help documentation [how to get URL, Client ID , Client Secret and Token Service URL](#).  
 For more information refer to how to [create a HTTP destination](#) and [how to use Workflow APIs](#).

#### Configure OAuth2UserTokenExchange Workflow Destination

Configure a destination with the following parameters:

Name	WorkflowActions
Type	HTTP
Proxy Type	Internet
Authentication	OAuth2UserTokenExchange
URL	https://api.workflow.<region-host>.hana.ondemand.com/workflow-service/rest
Client ID	
Client Secret	
Token Service URL	<"uaa":"url"/>/oauth/token
Additional Properties:	Name: bpmprocessvisibility.triggerWorkflow Value: user

Please refer help documentation [how to get URL, Client ID , Client Secret and Token Service URL](#).  
 For more information refer to how to [create a HTTP destination](#) and [how to use Workflow APIs](#).

#### Configure Process Visibility Navigation Destination

Configure a destination with the following parameters:

Name	ProcessVisibilityNavigation
Type	HTTP
Proxy Type	Internet
Authentication	NoAuthenitciation
URL	https://<portal site host name>/cp.portal/site#pv-showScenarioOverview?
Additional Properties:	Name: bpmprocessvisibility.navigationLink Value: true

## Configure OAuth2ClientCredentials Business Rules Destination

Configure a Business Rules destination with the following parameters:

Name	BusinessRules
Type	HTTP
Proxy Type	Internet
Authentication	OAuth2ClientCredentials
URL	{rule_runtime_url}/rules-service
Client ID	
Client Secret	
Token Service URL	<"uaa":"url">/oauth/token

Please refer help documentation [how to get URL, Client ID , Client Secret and Token Service URL](#)

For more information refer to how to [create a HTTP destination](#) and [how to access business rules APIs](#) using OAuth 2.0 Authentication (client credentials)

## Configure OAuth2ClientCredentials Business Rules Destination (Service Instance)

Ignore this step If there is already a destination using Business Rules service instance created, Create new Destination to call Business Rules Service APIs using a Service route from SAP UI5 Component.

- Click New Destination.
- Select Service Instance as Destination Configuration.
- Select Service Instance as BusinessRules.
- Enter Name as BusinessRules\_CFLP and click Next button.

Destination Configuration Blank Template Service Instance

Service Instance: \*

Name: \*

Description:

- Click Save button.

Destination Configuration

Name: \* BusinessRules\_CFLP

Type: HTTP

Description: Rules destination from SAP UI5 API calls using ...

URL: \* https://sap.com/DUMMY\_URL

Proxy Type: Internet

Authentication: OAuth2ClientCredentials

Client ID: \*

Client Secret: \*\*\*\*\*

Token Service URL: \*

Token Service User:

Token Service Password:

Additional Properties

endpoints	{"rule_repository_url":...	
html5-apps-r...	{"app_host_id": "cbd0c...	
saasregistrye...	true	
sap.cloud.se...	com.sap.bpm.rule	

Use default JDK truststore

Save Cancel

### Configure OAuth2ClientCredentials Workflow Destination (Service Instance)

Ignore this step If there is already a destination using Workflow service instance created, Create new Destination to call Workflow Service APIs using a Service route from SAP UI5 Component.

- Click New Destination.
- Select Service Instance as Destination Configuration.
- Select Service Instance as Workflow.
- Enter Name as Workflow\_CFLP and click Next button.
- Click Save button.

## Configure OAuth2ClientCredentials SAP Cloud Integration Service Destination

A HTTP destination is required in the Cloud Foundry account where SAP Workflow Management is subscribed.

Name	CPI
Type	HTTP
Proxy Type	Internet
Authentication	OAuth2ClientCredentias
URL	

Token Service URL	
Token Service User	Same as Client ID
Token Service Password	Same as Client Secret

For more information refer how to [create a HTTP destination](#) and Authentication (client credentials).The URL should be the runtime url. Please refer how to get your Integration tenant [runtime url](#). Please refer help documentation [how to get URL, Client ID , Client Secret and Token Service URL](#).

## Configure SAP ERP Destination

An RFC destination is required to the SAP Integration Suite. Configure destination, Type as RFC, Proxy Type as On Premise. Please refer how to [create a RFC destination](#). Add Additioanl Properties jco.client.ashost, jco.client.client, jco.client.sysnr

Destination Configuration

<p>Name: * <input type="text"/></p> <p>Type: <input type="text" value="RFC"/></p> <p>Description: <input type="text"/></p> <p>Proxy Type: <input type="text" value="OnPremise"/></p> <p>User: <input type="text"/></p> <p>Password: <input type="password" value="*****"/></p> <p>Alias User: <input type="text"/></p> <p>Repository User: <input type="text"/></p> <p>Repository Password: <input type="password" value="*****"/></p> <p>Location ID: <input type="text"/></p>	<p>Additional Properties</p> <table border="0"> <tr> <td><input type="text" value="jco.client.ash..."/></td> <td><input type="text"/></td> <td></td> </tr> <tr> <td><input type="text" value="jco.client.client"/></td> <td><input type="text"/></td> <td></td> </tr> <tr> <td><input type="text" value="jco.client.sysnr"/></td> <td><input type="text"/></td> <td></td> </tr> </table>	<input type="text" value="jco.client.ash..."/>	<input type="text"/>		<input type="text" value="jco.client.client"/>	<input type="text"/>		<input type="text" value="jco.client.sysnr"/>	<input type="text"/>	
<input type="text" value="jco.client.ash..."/>	<input type="text"/>									
<input type="text" value="jco.client.client"/>	<input type="text"/>									
<input type="text" value="jco.client.sysnr"/>	<input type="text"/>									

## Configure Cloud Connector

Configure your SAP Integration Suite account and ECC system in Cloud Connector to enable secure tunnel for RFC calls. Please refer the help documentation to [configure Cloud Connector](#).

## Configure SAP ERP

### General Prerequisites

Purchasing is configured in SAP ERP and relevant purchase requisitions can be maintained accordingly.

Necessary authorizations for the technical user to call the following function modules in SAP ECC

in the relevant in purchasing areas:

- BAPI\_REQUISITION\_CREATE
- BAPI\_REQUISITION\_CHANGE
- BAPI\_REQUISITION\_RELEASE
- BAPI\_MATERIAL\_GETLIST
- BAPI\_MATERIAL\_GET\_DETAIL
- SLS\_LORD\_GET\_VALUES\_WERKS
- BAPI\_COSTCENTER\_GETDETAIL1

For Configuration Scenario 2 the enhancement of transaction ME51(N) is required, as described in chapter “Create Purchase Requisition from SAP ERP and Start Approval, Release in SAP Workflow Management”.

### Configuration Scenario 1 - Requisition Block

#### Scenario description

Purchase requisitions, that are to be created in the SAP Workflow Management and replicated into SAP ERP via BAPI are controlled from SAP Workflow Management until the release has taken place.

Before release, the BAPI replicates new “purchases requisitions for approval” together with Block ID = 3 (Blocked for Central Processing).

The Block ID will be removed as soon as the requisition is released in SAP Workflow Management.

#### Scenario configuration

Release Strategy must not be maintained for the relevant purchase requisitions, as the SAP Workflow Service will only remove the Block ID after the release has taken place.

### Configuration Scenario 2 - Release Strategy

#### Scenario description

In case the purchase requisitions are to be created within SAP ERP and not via BAPI using the Requisition Block described above, then a Release Strategy must be customized to identify the “purchases requisitions for approval”, that are to be released in Workflow Management.

#### Scenario configuration

As all details of the release process are controlled within the SAP Workflow Management, in SAP ERP the following fix values for Release Strategy and Release Code must be maintained for the relevant purchase requisitions:

- Release Strategy named “EX” (External Release Strategy)
- Release Code named “EX” (External Approval)

The Release Strategy must be defined within the Standard Release Procedure for Purchases Requisitions, that is available within transaction SPRO, SAP reference IMG, under the following path:

SAP Customizing Implementation Guide > Materials Management > Purchasing > Purchase

## Requisition > Release Procedure

Both standard options can be used “Procedure without Classification” and “Procedure with Classification” as well.

It’s not the scope of this document to explain all details regarding those configuration options, but in the following paragraph a simple example is introduced.

Important notes for maintenance of Release Strategy “EX”:

- Use Release indicator = X (blocked) for creation of new purchase requisitions
- Use a single release step with Release Code “EX” that leads directly into Release indicator = 2 (RFQ/purchase order)

Additional notes:

- It’s recommended that the fields in purchase requisitions are not editable in ERP, while release indicator is X (blocked). The detailed customizing is not in scope of this document.
- It is also recommended that the authority to approve the respective purchase requisitions in ERP is only given in an emergency. Means the Approval for Release Code EX-EX must be reserved for Workflow Management Approval.

### Scenario example

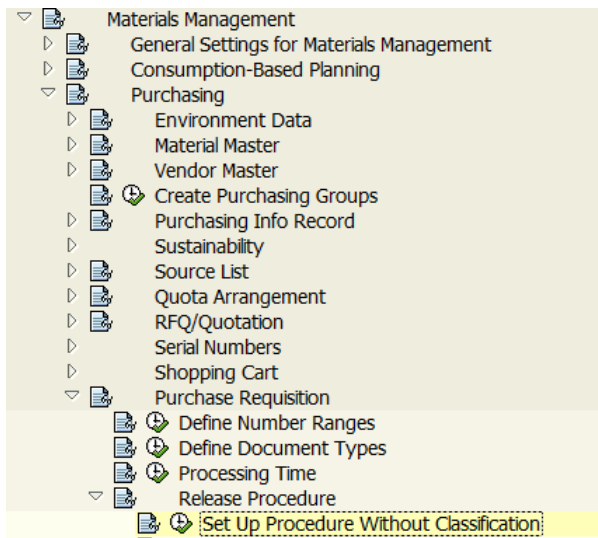
In this simple example we use a “Procedure without Classification” and restrict/define the “purchase requisitions for approval” only with one value:

- Plant of purchase requisition = 0001

That means all purchase requisitions for plant 0001 are to be released via SAP Workflow Management.

Starting point is transaction SPRO, SAP reference IMG. For this easy example it is prerequisite that no procedure with classification is maintained.

**Step 1 – Choose “Set Up Procedure Without Classification” in the “SAP Customizing Implementation Guide”:**



**Step 2 – Choose “Release Codes” and maintain:**

Release code	Description
EX	External Approval

**Step 3 - Choose “Release indicator” and check the values, especially “2” and “X”:**

Release ID	Description
1	Request for quotation
2	RFQ/purchase order
3	RFQ/PO no change of date
4	RFQ/PO no changes
A	Fixed RFQ
B	Fixed RFQ/purchase order
R	Released
X	Blocked

**Step 3 – Choose “Assign Release Indicators” and maintain:**

Rel.Str.	C1	C2	C3	C4	C5	C6	C7	C8	Rel. ID	Description
EX									X	Blocked
EX	X								2	RFQ/purchase order

**Step 3 - Choose “Release Points: Prerequisites” and maintain:**

Rel.Strat.	Release code	Description	C1	C2	C3	C4	C5	C6	C7	C8
EX	EX	External Approval	X							

**Step 3 - Choose “Determination of Release Strategy” and maintain:**

AcctAssCat	Mat. Grp	Plnt	Value of purch. req.	Crcy	Release Strategy
		0001	0,00	EUR	EX

# Import, Configure and deploy Integration Content

This Live Process content package requires SAP Integration Suite to create, modify and release purchase requisition line items. An integration content package [SAP ERP integration with SAP Workflow Management](#) is available in SAP API Business hub to integrate SAP Workflow Management or SAP Build Process Automation with SAP ERP. The following Integration models are available in this package. All integration models are using RFC Adapter to call the required APIs in SAP ECC.

The screenshot displays the SAP Integration Suite interface for the 'SAP ERP Integration with SAP Workflow Management' content package. The interface includes a header with the SAP logo, 'Cloud Integration', and 'Integration Advisor'. Below the header, there are navigation options: 'Edit', 'Export', 'Publish', and 'Delete Package'. The main content area shows the package details, including the description: 'Create Purchase Requisition in SAP ERP, Approve and Release from SAP Business Technology Platform Workflow Management.', the vendor 'SAP', and the mode 'Editable'. The version is '1.0.0'. Below this, there are tabs for 'Overview', 'Artifacts (8)', 'Documents (2)', 'Tags', and 'Comments'. The 'Artifacts (8)' tab is active, showing a table of integration flows. The table has columns for 'Name', 'Type', 'Version', and 'Actions'. Each row represents an integration flow, such as 'Create Purchase Requisition in SAP ERP' (version 1.0.1) and 'Delete Purchase Requisition Items in SAP ERP' (version 1.0.0). Each row includes a checkbox and an 'Actions' icon.

<input type="checkbox"/>	Name	Type	Version	Actions
<input type="checkbox"/>	<b>Create Purchase Requisition in SAP ERP</b> Creates Purchase Requisition in SAP ERP Created	Integration Flow	1.0.1	
<input type="checkbox"/>	<b>Delete Purchase Requisition Items in SAP ERP</b> Deletes Purchase Requisition Items in SAP ERP Created	Integration Flow	1.0.0	
<input type="checkbox"/>	<b>Get Material list from SAP ERP</b> Query to get available materials from SAP ERP Created	Integration Flow	1.0.0	
<input type="checkbox"/>	<b>Get Material from SAP ERP</b> Read Material data from SAP ERP Created	Integration Flow	1.0.0	
<input type="checkbox"/>	<b>Get Plant List from SAP ERP</b> Query to get Plant List from SAP ERP Created	Integration Flow	1.0.0	
<input type="checkbox"/>	<b>Get Purchase Requisition from SAP ERP</b> Read Purchase Requisition data from SAP ERP Created	Integration Flow	1.0.0	
<input type="checkbox"/>	<b>Release Purchase Requisition in SAP ERP</b> Releases Purchase Requisition Items in SAP ERP Created	Integration Flow	1.0.0	
<input type="checkbox"/>	<b>Update Purchase Requisition in SAP ERP</b> Updates Purchase Requisition in SAP ERP Created	Integration Flow	1.0.0	

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

## Import Prepackaged Integration content using SAP Integration Suite

- Access your SAP Integration Tenant management node. Please refer [help documentation](#) on how to get Tenant management node address.
- Please refer help documentation on how to [import content packages](#).
- View all pre-packaged integration flow under Discover->Integration
- Search content package “SAP ERP Integration with SAP Workflow Management”
- Click on the package “SAP ERP Integration with SAP Workflow Management”.
- 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 Externalized Parameters, set configured value as RFC Destination created in the section Configure SAP ERP Destination

Configure "Create Purchase Requisition in SAP ERP"

**Receiver**

Receiver:

Adapter Type:

**Connection**

Destination:

Save Deploy Close

- Deploy the integration model

These Integration models are used from the Live Process content package Purchase Requisition Approval and Release.

## Configure SAP Integration Suite Interface for External Approver Determination

If an approval step requires task owner determination logic using SAP ERP or SuccessFactors or 3<sup>rd</sup> party systems, an interface using SAP Integration Suite (CPI) needs to be implemented. Approvers can be determined using Purchase Requisition Header level or Line-Item level. Depending on the use case, implement this interface as given below. It is possible to configure approval at header level or line-item level using a business rule PurchaseRequisitionApprovalStrategy provided with this content package.

### Purchase Requisition Approval - Line-Item level

Each line item in a purchase requisition requires separate approval.

#### Interface Signature

<CPI destination Url>/http/DetermineApproval

The approval workflow will be using a destination CPI and http/DetermineApproval as relative path.

**Input:** Purchase Requisition Line Item (Structure data type)

ATTRIBUTE	TYPE	DESCRIPTION
Requisition Id	String	Purchase Requisition Number
Document Type	String	Purchase Requisition Document Type
Net Amount	Number	Price of Line item
Purchasing Organisation	String	Purchasing organisation
Material Group	String	Material Group
Purchasing Group	String	Purchasing Group
Plant	String	Plant
Step Name	String	Process Step Name

Currency	String	Currency of Line Item
AccountAssignment	String	Account Assignment

Request body for CPI interface must be in JSON format (example below):

```
{
  "PurchaseRequisitionData": {
    "RequisitionId": "",
    "ItemNumber": "",
    "NetAmount": "",
    "DocumentType": "",
    "MaterialGroup": "",
    "PurchasingGroup": "",
    "Plant": "",
    "PurchasingOrg": "",
    "Currency": "",
    "Quantity": "",
    "StepName": "",
    "AccountAssignment": ""
  }
}
```

**Output:** LineItemApprover (Structure)

ATTRIBUTE	TYPE	DESCRIPTION
Approver Name	String	Approver Names, Comma Separated Names. Approver Names are assigned to the approval task, depending on your identity authentication settings please provide Business Technology Platform Id of business users.
Approver Email	String	Email Ids of Approvers, comma separated.
Approver Group	String	Approver Group ID available in Business Technology Platform
Group Name	String	Approver Group Name
Task Duration	Number	Number of hours planned to complete the task
Duration From	String	Task duration calculated from beginning of a Process Step or immediately before the actual Task.
Auto Approval	Boolean	Approver required or not. (true/false)

It is possible to have multiple approval tasks for a Step. For eg: Cost center approval can have multiple approval tasks and the respective approvers can be provided as a JSON array. Response body for CPI interface must be in JSON format (example below):

```
{
  "Result": [
    {
      "LineItemApprover": {
        "ApproverName": "",
        "ApproverEmail": "",
        "ApproverGroup": "",
        "GroupName": "",
        "TaskDuration": 1,
        "DurationFrom": "Step",
        "AutoApproval": false
      }
    }
  ]
}
```

## Purchase Requisition Approval - Header level

All line items in a purchase requisition require only one approval.

### Interface Signature

<CPI destination Url>/http/DetermineHeaderApproval

The approval workflow will be using destination CPI and http/DetermineHeaderApproval as relative path.

**Input:** Purchase Requisition Header (Structure)

ATTRIBUTE	TYPE	DESCRIPTION
Requisition Id	String	Purchase Requisition Number
Document Type	String	Purchase Requisition Document Type
NetAmount	Number	Total value of all line items
Purchase Value	Number	Purchase Requisition Value
Purchasing Organization	String	Purchasing organization
Step Name	String	Process Step Name

Request body for CPI interface must be in JSON format (example below):

```
{
  "PurchaseRequisitionData ": {
    "RequisitionId": "",
    "NetAmount": "",
    "DocumentType": "",
    "PurchasingOrganisation": "",
    "StepName": ""
  }
}
```

**Output:** Approver (Structure)

ATTRIBUTE	TYPE	DESCRIPTION
Approver Name	String	Approver Names, Comma Separated Names. Approver Names are assigned to the approval task, depending on your identity authentication settings please provide Business Technology Platform Id of business users.
Approver Email	String	Email Ids of Approvers, comma separated.
Approver Group	String	Approver Group ID available in Business Technology Platform.
Group Name	String	Approver Group Name
Task Duration	Number	Number of hours planned to complete the task
Duration From	String	Task duration calculated from beginning of a Process Step or immediately before the actual Task.
Auto Approval	Boolean	Approver required or not. (true/false)

It is possible to have multiple approval task for a Step. For eg: purchasing approval can have multiple approval tasks and the respective approvers can be provided as a JSON array. Response body for CPI interface must be in JSON format (example below):

```
{
  "Result": [
    {
```

```
"LineItemApprover": {  
  "ApproverName": "",  
  "ApproverEmail": "",  
  "ApproverGroup": "",  
  "GroupName": "",  
  "TaskDuration": 1,  
  "DurationFrom": "Step",  
  "AutoApproval": false  
}  
}  
]  
}
```

## How to start the Process Variant

Activating a Process Variant creates a new Workflow Definition, which can then be operated like any other workflow. To start the workflow for a given variant, three steps are necessary:

- Determine Workflow Definition Id
- Define Start Payload (Initial Context)
- Start the workflow using custom UI5 application or call Workflow APIs from remote applications including SAP ERP.

### Define Start Payload (Initial Context)

The predefined SAP UI5 ui and Business Rules in this package expect a specific workflow context. This context is given to the workflow instance upon starting. Following is the format defined for the Purchase Requisition Approval and Release Process:

```
{
  "definitionId": "InitializePurchaseRequisitionApprovalProcess",
  "context": {
    "PurchaseRequest": {
      "DocumentId": "",
      "Requestor": {
        "Name": "",
        "UniqueId": "",
        "Email": ""
      }
    }
  }
}
```

FIELD	COMMENT
definitionId	Process variant ID. SAP Workflow Management, Monitor Workflow -Workflow Definitions will enable you to get the deployed Workflow Definition.
context.PurchaseRequest.DocumentId	Purchase Requisition Document Number
context. PurchaseRequest.Requestor.UniqueId	User Id of the requester in Identity Management. Requestor might get Rework tasks in their inbox.
context. PurchaseRequest.Requestor.Name	Name of the requester.
context. PurchaseRequest.Requestor.email	Email id of the requester.

# Create Purchase Requisition, Approval and Release from SAP Workflow Management

Please refer to the documentation for [Creating a Start UI](#) with UI5

See the [API Reference](#) for “Workflow Instances” – “Start a new Instance” by issuing a REST POST call to the `/v1/workflow-instances` endpoint.

Please refer the [Sample SAP UI5 application](#) to create a new purchase Requisition and start approval process.

Table 1. Start Payload fields

FIELD	COMMENT
definitionId	Process variant ID. SAP Workflow Management, Monitor Workflow -Workflow Definitions will enable you to get the deployed Workflow Definition.
context.PurchaseRequest.DocumentId	Purchase Requisition Document Number
context. PurchaseRequest.Requestor.Uniqueld	User Id of the requester in Identity Management. Requestor might get Rework tasks in their inbox.
context. PurchaseRequest.Requestor.Name	Name of the requester.
context. PurchaseRequest.Requestor.email	Email id of the requester.

## Developer Testing

If there is no Purchase Request Creation application available, test the approval Process using Monitor Workflow – Workflow Definitions.

1. Create a Purchase Requisition in SAP ERP
2. Copy the Document ID
3. Go to SAP Workflow Management, Monitor Workflow - Workflow Definitions.  
Please refer how to test Workflow Definitions in [help documentation](#).
4. Create a new Workflow Instance using the below Payload.

```
{
  "PurchaseRequest": {
    "DocumentId": "",
    "Requestor": {
      "Name": "",
      "Uniqueld": "",
      "Email": ""
    }
  }
}
```

## Create Purchase Requisition from ECC and Start Approval, Release in SAP Workflow Management

For Configuration Scenario 2 (refer details in chapter “Configure SAP ECC”), transaction ME51(N) must be enhanced in ECC:

The classic BAdI MD\_PURREQ\_POST - method POST\_AFTER\_SAVE - can be used to implement the development to start the approval in SAP BTP for purchase requisitions with release strategy “EX”!

### Important notes for development:

The SAP Workflow Service must be started via API. See the [API Reference](#) for “Workflow Instances” - “Start a new Instance” by issuing a REST POST call to the /v1/workflow-instances endpoint.

More help regarding “Access Workflow APIs” can be found here:

<https://help.sap.com/viewer/e157c391253b4ecd93647bf232d18a83/Cloud/en-US/c2bd37c63dda47449e24b8830ba312f1.html>

The necessary data for the API is described in the following json-file and the blue marked texts must be replaced with the current requisition data and user’s master data:

```
{
  "definitionId": "InitializePurchaseRequisitionApprovalProcess",
  "context": {
    "PurchaseRequest": {
      "DocumentId": "<Purchase Requisition Document Number>",
      "Requestor": {
        "Name": "<Name of the requester>",
        "UniqueId": "<User Id of the requester>",
        "Email": "<Email id of the requester>"
      }
    }
  }
}
```

To separate the external call from the posting routines within ECC, the ABAP-development should be capsulated in a transactional RFC call:

```
CALL FUNCTION 'your module for API-call' IN BACKGROUND TASK DESTINATION 'destination'.
```

The new “destination” of Type 3 (ABAP destination) must allow its technical user to call the API above within you new function module “your module for API-call”.