

SAP BUSINESS TECHNOLOGY PLATFORM | EXTERNAL

# Setup Guide

## Manage Posting Period Approval using SAP Workflow Management or SAP Build Process Automation

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# Overview

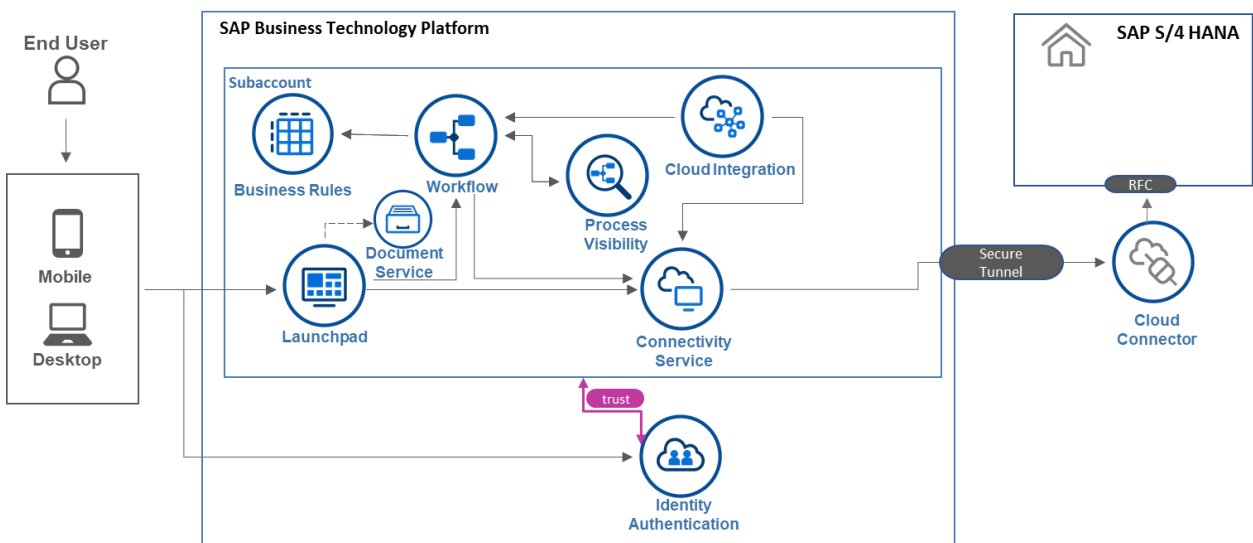
This document provides information about setup steps to consume the package **Manage Posting Period Approval**. The main audience of this document are Business Process Experts and Process Operators.

The workflow focuses on enabling business to open the already closed periods due to some adjustments or corrections to be made as suggested by the auditors. The solution focuses on a custom workflow based on BTP that can help business to get proper approvals before opening the closed posting periods.

## Features

- Plug and Play with SAP S/4HANA without additional development.
- New Process variants can be configured in a no-code approach.
- Agent/approver determination using Business Rules or external service.
- Pre-built integration content to call SAP S/4HANA from SAP Workflow Management or SAP Build Process Automation.
- Out-of-the-box visibility into key process performance indicators.

## Solution Diagram



# Required SAP Business Technology Platform Services

The workflow content package **Manage Posting Period Approval** is intended to be used for SAP S/4HANA and requires the following services in SAP BTP:

- SAP Build Process Automation or SAP Workflow Management to orchestrate the process.
- SAP Integration Suite for data activities with Emission Management information.
- SAP Connectivity service (cloud connector) to establish access to SAP S/4HANA.
- SAP Launchpad service to access the apps that are involved in the process.
- SAP Business Application Studio to modify/deploy the SAPUI5 applications.
- SAP BTP, Cloud Foundry runtime.
- SAP Cloud Identity Services (Optional)

# Setup and Configuration

**Manage Posting Period Approval** 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 SAP Workflow Management Destinations](#)
  - 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 SMTP Mail Destination

Configure email destination to automatically send email notification to the involved parties. For more information on configuring the destination, see [configure SMTP mail destination](#).

### 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: \* sap\_processautomation

Name: \* process\_atuomation\_service\_destination

Description: Call SAP Process Automation APIs using a service route

Additional Properties [New Property]

[Next] [Cancel]

---

**Destination Configuration**

Name: \* process\_automation\_service\_destination

Type: HTTP

Description: Call SAP Process Automation APIs using a s...

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

Proxy Type: Internet

Authentication: OAuth2ClientCredentials

Use mTLS for token retrieval

Client ID: \* sb-... I9...

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

Token Service URL Type: \* Dedicated Common

Token Service URL: \* https://... ..

Token Service User: .....

Token Service Password: .....

**Additional Properties**

endpoints	{ "api": "https://:..." }	[trash]
html5-apps...	{ "app_host_id": "..." }	[trash]
saasregistry...	true	[trash]
sap.cloud.s...	com.sap.spa.process...	[trash]
sap.cloud.s...	spa	[trash]

Use default JDK truststore

[Save] [Cancel]

## Configure SAP Workflow Management

Manage Posting Period Approval content package requires SAP Workflow Management subscription or a CPEA contract. Follow the setup and configuration section of SAP Workflow Management.

<https://help.sap.com/viewer/6f55baaf330443bd8132d071581bbae6/Cloud/en-US/d7910e2bf7f64afc9d0eb21b0cc9e84d.html>

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 workflow email destination to automatically send email notification to the involved parties. For more information on configuring the destination, see [configure workflow email destination](#).

### Configure OAuth2ClientCredentials Workflow Destination

A HTTP destination is required in the BTP subaccount where SAP Workflow Management is subscribed. Create a destination with name "Workflow" 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	Workflow
Type	HTTP
Proxy Type	Internet
Authentication	OAuth2ClientCredentials
URL	<rest_api_url>
Client ID	<client ID>
Client Secret	<client secret>
Token Service URL	<uaa.url>/oauth/token

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\_START
- WORKFLOW\_INSTANCE\_UPDATE\_CONTEXT
- WORKFLOW\_INSTANCE\_GET
- 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 OAuth2ClientCredentials Business Rules Destination

A HTTP destination is required in the Cloud Foundry account where SAP Workflow Management is subscribed. Create a destination with name "BUSINESS\_RULES" with the following configuration if it doesn't exist already. Please refer how to [create a HTTP destination](#) and [how to access business rules APIs](#) using OAuth 2.0 Authentication (client credentials)

Name	BUSINESS_RULES
Type	HTTP
Proxy Type	Internet
Authentication	OAuth2ClientCredentials
URL	<rule_runtime_url>/rules-service
Client ID	<client ID>
Client Secret	<client secret>
Token Service URL	<uaa.url>/oauth/token

### Configure Destination to Enable Start & Step Conditions

To enable the usage of start conditions and step conditions on a process variant, create a destination for business rules with the configuration as mentioned in the following help document:

[https://help.sap.com/viewer/6f55baaf330443bd8132d071581bbae6/Cloud/en-US/543b5dbd77d940b4b1f972298b559911.html?q=WM\\_BUSINESSRULES](https://help.sap.com/viewer/6f55baaf330443bd8132d071581bbae6/Cloud/en-US/543b5dbd77d940b4b1f972298b559911.html?q=WM_BUSINESSRULES)

### Configure OAuth2 Client Credentials Workflow Destination (Service Instance)

Similarly, create new Destination to call Workflow Service APIs using a Service route from SAP UI5 Component. For more details, follow the official help document:

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



## Configure Cloud Integration Destination

To call an integration flow, a HTTP destination is required in the SAP BTP tenant where the SAP Workflow Management is subscribed. Create a destination called CPI with either Basic Authentication or OAuth2ClientCredentials.

### Destination with OAuth2ClientCredentials Authentication

Name	CPI
Type	HTTP
Proxy Type	Internet
Authentication	OAuth2ClientCredentials
URL	<runtime.url>
Client Id	<client ID>
Client Secret	<client secret>
Token Service URL	<oauth.url.for.clientCredentials>

### Additional Properties to Destination

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

WebIDEEEnabled	true
WebIDESystem	CPI
WebIDEUsage	odata_gen

## Configure SAP S/4HANA Destination

Configure a S/4 HANA destination to connect with SAP S/4HANA on-premise .

Note: This destination is required by Cloud Platform Integration and Start UI.

Name	S4HANA
Type	HTTP
Proxy Type	On-Premise
User	<ONPREMISE_ USER>
Password	<ONPREMISE_PASSWORD>
Authentication	BasicAuthentication
URL	<OData base URL of SAP S/4HANA>
Additional Properties	sap-client: <client number>

## Configure APIs in SAP S/4HANA

Following APIs are needed to be configured in SAP S/4HANA to use the content package.

### OData Services:

/sap/opu/odata/sap/FAC\_GL\_MAINT\_POSTING\_PERIOD\_SRV

/sap/opu/odata/sap/API\_COMPANYCODE\_SRV

### Steps to Register OData Services in SAP Gateway

1. Go to t-code "/IWFND/MAINT\_SERVICE"
2. Click on "Add Service"
3. Select the required System Alias (Select LOCAL as system alias in case of Embedded Deployment of Gateway)
4. Enter Technical Service Name as "FAC\_GL\_MAINT\_POSTING\_PERIOD\_SRV" and click on "Get Services"
5. Select "FAC\_GL\_MAINT\_POSTING\_PERIOD\_SRV" and click on "Add Selected Services"
6. Enter the required package and click on OK

### List of BAPI/RFC which need to be available in SAP S/4 HANA

ZWF\_RFC\_HR\_MASTER\_GET\_APPR – Fetch Approver Details

Note: Steps to implement custom ABAP objects is mentioned in the Appendix.

## Configure Cloud Connector

For SAP S/4HANA on-premise landscape, configure cloud connector to enable secure tunnel to SAP BTP tenant. Please refer the help documentation to [configure Cloud Connector](#).

Services/Resources that need to be exposed from SAP S/4HANA on-premise using Cloud Connector

Resources	Protocol	Backend-Type
/sap/opu/odata/sap/FAC_GL_MAINT_POSTING_PERIOD_SRV	OData	ABAP System
ZWF_RFC_HR_MASTER_GET_APPR	RFC	ABAP System
/sap/opu/odata/sap/API_COMPANYCODE_SRV	OData	ABAP System

## Import, configure and deploy cloud integration contents

This package utilizes Cloud Integration capability within SAP Integration Suite to provide integration between SAP ERP (or SAP S/4HANA) and SAP Build Process Automation or SAP Workflow Management. Further details can be found in dedicated integration guide of the integration package “SAP Build Process Automation Integration with SAP S/4HANA for Manage Posting Period Approval”.

## Appendix

Perform the below mentioned steps for implementation of custom ABAP objects

### Creating Function Group

#### Steps:

1. Go to t-code “SE37”
2. In Menu, select Goto -> Function Groups -> Create Group
3. Enter Function Group name as “ZWF\_FG\_MANAGEPP” and also enter a meaningful Short Text (Select the required package name to save this object)
4. Go to t-code “SE80”
5. Select “Function Group” from dropdown
6. Enter “ZWF\_FG\_MANAGEPP” as the name of function group and click on Display button
7. Right click on the Function Group “ZWF\_FG\_MANAGEPP “ on the left side panel and “Click on “Activate” (Click OK button on the pop-up which shows list of inactive objects)

### Creating Table Type

#### Steps:

1. Go to t-code SE11
2. Select “Data Type” radio button
3. Enter “ZWF\_APPR\_DET” as name of “Data Type”
4. Select “Structure” and click on OK
5. Enter the below mentioned fields and description

**Dictionary: Display Structure**

Structure: ZWF\_APPR\_DET Active

Short Description: Structure for Approver Details

Attributes Components Input Help/Check Currency/quantity fields

Component	Typing Method	Component Type	Data Type	Length	Decimal...
USER ID	Types	SYSID	CHAR	30	0
ENAME	Types	EMNAM	CHAR	40	0
EMAIL ID	Types	COMM ID LONG	CHAR	241	0

6. Click on “Save”
7. Click on “Activate” (Click OK button on the pop-up which shows list of inactive objects)
8. Go to t-code SE11
9. Select “Data Type” radio button

10. Enter "ZWF\_APPR\_DET\_T" as name of "Data Type"
11. Select "Table Type" and click on OK
12. Enter the below mentioned structure and description

**Dictionary: Display Table Type**

Table Type: ZWF\_APPR\_DET\_T Active

Short text: Table type for Approver Details

Attributes | **Line Type** | Initialization and Access | Primary Key | Secondary Key

Line Type: ZWF\_APPR\_DET

Built-in type

    Data Type: [ ]

    No. of Characters: 0      Decimal Places: 0

Reference type

Referenced type: [ ]

Reference to built-in type

        Data Type: [ ]

        Length: 0      Decimal Places: 0

13. Click on "Save"
14. Click on "Activate" (Click OK button on the pop-up which shows list of inactive objects)

## Creating Function Modules

### Steps:

15. Go to t-code "SE37"
16. Click on "Create" button
17. Enter "ZWF RFC\_HR\_MASTER\_GET\_APPR" as name of Function Module
18. Enter "ZWF\_FG\_MANAGEPP" as Function Group
19. Enter a meaningful short text
20. Click on "Save" (Click on OK in successive pop-ups)
21. Go to "Import" tab and enter the below mentioned entries

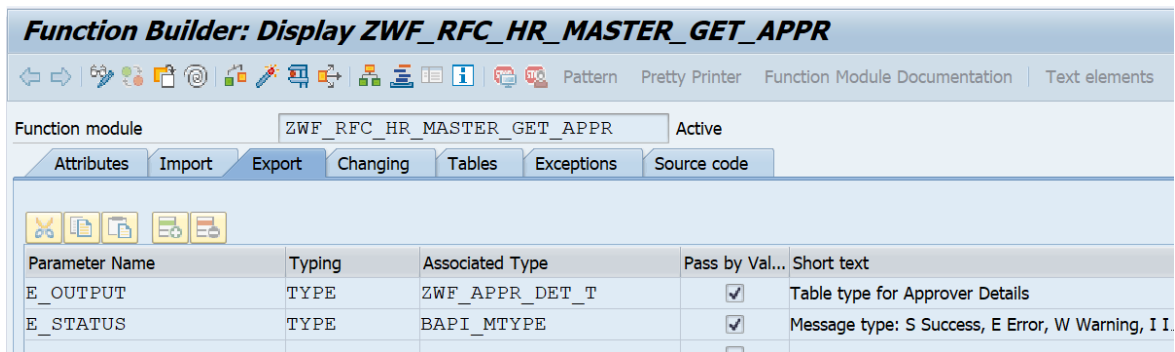
**Function Builder: Display ZWF RFC\_HR\_MASTER\_GET\_APPR**

Function module: ZWF RFC\_HR\_MASTER\_GET\_APPR Active

Attributes | **Import** | Export | Changing | Tables | Exceptions | Source code

Parameter Name	Typing	Associated Type	Default value	Opti...	Pass...	Short text
I_BUKRS	TYPE	BUKRS		<input type="checkbox"/>	<input checked="" type="checkbox"/>	Company Code
I_PLANS	TYPE	PLANS		<input type="checkbox"/>	<input checked="" type="checkbox"/>	Position
				<input type="checkbox"/>	<input type="checkbox"/>	

22. Go to "Export" tab and create the below entries

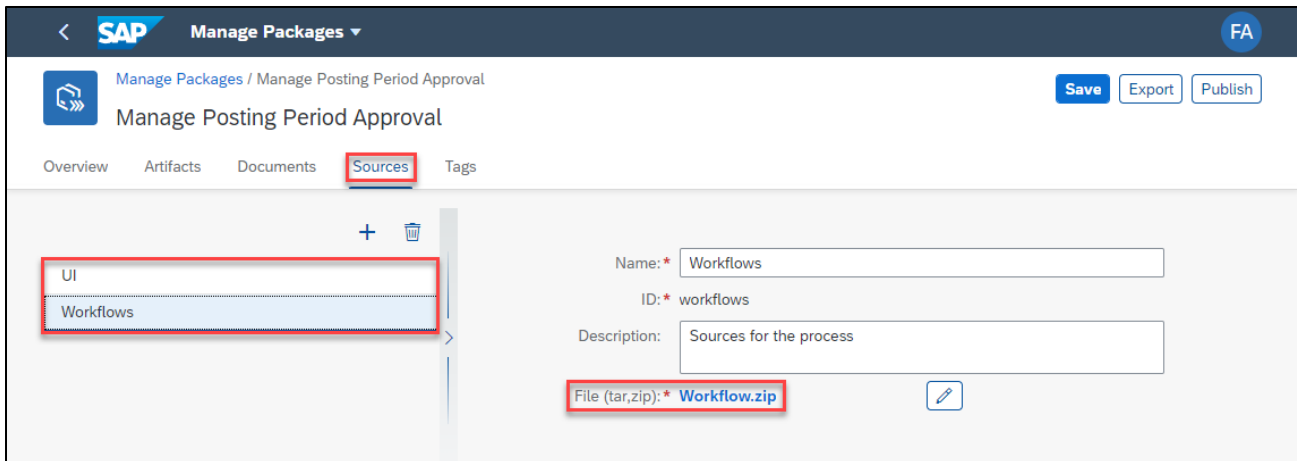


23. Go to "Source Code" tab and paste the attached code from [SAP Note 3138676](#) for "ZWF RFC HR MASTER GET APPR"
24. Go to "Attributes" tab and select radio button for "Remote-Enabled"
25. Click on "Save"
26. Click on "Activate" (Click OK button on the pop-up which shows list of inactive objects)

# Optional: Making Custom changes in SAP Workflow Management

**Prerequisite:** an account with access to SAP Business Application Studio as well as space developer permissions in BTP.

The source code for both the process and the SAPUI5-based user interfaces are available as part of the content package. With this, custom modifications can be implemented to adapt the content for specific needs.



- in **Manage Package** app, select **Sources** tab
- select the archive you want to download in the list on the left side
- click on the blue filename behind **File (tar, zip)** to download the attached source archive
- Import the archive into SAP Business Application Studio
- make any necessary modifications
- Build and deploy the MTA archive, using the space developer credentials

Please refer to the documentation for [SAP Business Application Studio](#), the documentation for [Modeling a Workflow](#) and the documentation for [Creating User Interfaces](#) for details.

# Optional: Making Custom changes in SAP Build Process Automation

**Prerequisite:** an account with access to SAP Business Application Studio as well as space developer permissions in BTP.

The source code for both the process and the SAPUI5-based user interfaces are available as part of the content package. With this, custom modifications can be implemented to adapt the content for specific needs.

SAP Application Development Manage Posting Period Approval - 3.0.0

Overview

Manage Posting Period Approval

Last updated on: Sep 27, 2022, 1:06:25 PM Created on: Sep 27, 2022, 1:06:25 PM Description: Approvals for Managing posting periods (Adjustable and Special Periods)

By: krishnendu.bhowmick@itcinfotech.com By: krishnendu.bhowmick@itcinfotech.com

Artifacts (7) Sources (2) Documents (5)

Name	Description
UI	SAPUI5 sources
Workflows	Sources for the process

- in **Application Lobby**, search the package name and select **Sources** tab
- select the archive you want to download in the list on the left side
- click on the blue filename behind **File (tar, zip)** to download the attached source archive
- Import the archive into SAP Business Application Studio
- make any necessary modifications
- Build and deploy the MTA archive, using the space developer credentials

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