

SAP BUSINESS TECHNOLOGY PLATFORM | EXTERNAL

Integration Guide

SAP Build Process Automation Integration with SAP S/4HANA for Automated Collections Reminder

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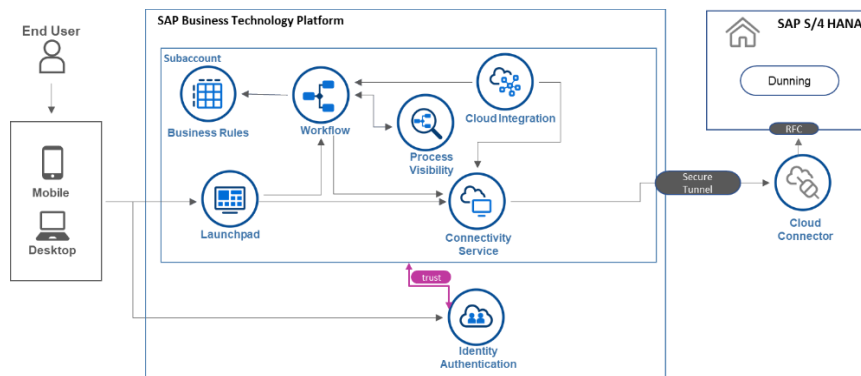
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Overview

This document provides information about configuration steps to setup the integration content to consume the workflow content packages **SAP Build Process Automation Integration with SAP S/4HANA for Automated Collections Reminder**. The primary audience of this document is integration administrators and developers.

This package contains Integration Flows to read dunning notices and check invoice payment status from SAP S/4HANA to SAP Build Process Automation or SAP Workflow Management and also post dunning block from SAP Build Process Automation or SAP Workflow Management to SAP S/4HANA.

Solution Diagram



Salient features of this integration package are:

- Check Invoice Payment Integration model fetches workflow instances of invoice items from SAP Build Process Automation or SAP Workflow Management and check the payment status from SAP S/4HANA. If the invoice is paid then send a message to the workflow instance in SAP Build Process Automation or SAP Workflow Management.
- Confirm Dunning Block Integration model fetches the Dunning Block posting confirmation from SAP S/4HANA and send it to SAP Build Process Automation or SAP Workflow Management.
- Create Workflow Instances for Dunning Notices Integration model dunning notices in SAP S/4HANA and create corresponding workflow instances in SAP Build Process Automation or SAP Workflow Management. This works with start timer.
- Create Workflow Instances for Dunning Notices-API Integration model dunning notices in SAP S/4HANA and create corresponding workflow instances in SAP Build Process Automation or SAP Workflow Management. This works with manual HTTPS request.
- Post Dunning Block Reason Integration model post Invoice Dunning Block Reason in SAP S/4HANA.

Required SAP Business Technology Platform Services

The workflow content package **collections automated reminders** is intended to be used for finance LOB specific to the invoice collection and dunning processes. It requires the following services in SAP Business Technology Platform.

- SAP Build Process Automation or SAP Workflow Management to orchestrate the process.
- SAP Integration Suite for data activities with Dunning Notices information.
- SAP Connectivity service (cloud connector) to establish access to SAP S/4HANA on-premise.
- 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.

Setup and Configuration

This section will explain how to setup the integration content that is required for the workflow content packages **SAP Build Process Automation Integration with SAP S/4HANA for Automated Collections Reminder** .

Configure SAP S/4HANA Communication User

Communication user is not required as there no connection needed with SAP S/4HANA Cloud

Configure SAP S/4HANA Destination

Configure a HTTP destination to connect with SAP S/4HANA on-premise, refer to documentation [here](#) for the same. The below is a destination configuration for for *SAP S/4HANA on-premise*.

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 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
/sap/opu/odata/sap/FAR_DUNNING_HISTORY_SRV	HTTPS
/sap/opu/odata/API_OPLACCTGDOCITEMCUBE_SRV	HTTPS
/sap/bc/srt/xip/sap/JournalEntryBulkChangeRequest_In	HTTPS

Import, configure and deploy cloud integration content

This workflow content requires the cloud integration to process the Dunning Notices in SAP S/4HANA. The integration content package **SAP Build Process Automation Integration with SAP S/4HANA for Automated Collections Reminder** is available in SAP API Business hub to integrate SAP Build Process Automation or SAP Workflow Management with SAP S/4HANA. Integration models use OData APIs to integrate with SAP S/4HANA. The following integration models are available in this package.

1. Check Invoice Payment
2. Confirm Dunning Block
3. Create Workflow Instances for Dunning Notices
4. Post Dunning Block Reason

Import the integration package to your SAP Cloud Integration tenant. To be able to import and deploy integration flows, you need the role AuthGroup.IntegrationDeveloper (in Neo environment) or PL_Integration_Developer (in cloud foundry environment) assigned in your tenant.

Import pre-packaged Integration content in SAP Integration Suite

- Access your SAP Integration Suite tenant management node (<https://<integrationtenant>/itspaces>).
- View all pre-packaged integration model under Discover->Integration. (<https://<integrationtenant>/itspaces/shell/discover>).
- Search content package “**SAP Build Process Automation Integration with SAP S/4HANA for Automated Collections Reminder**”.
- Click on the package “SAP Build Process Automation Integration with SAP S/4HANA for Automated Collections Reminder”.
- Click Copy to import the Integration content package to your workspace.
- Navigate to the *Monitor* view (<https://<integrationtenant>/itspaces/shell/monitoring>) to setup the security materials required for the package.
- Deploy the following credentials using the *Security Material* app.
- In Integration Suite, open Operations view, then click on Security Material to create and deploy security materials.

- S4HANA – (User Credentials)

The screenshot shows a 'Create User Credentials' dialog box with the following fields and values:

- Name: * S4HANA
- Description: To connect to SAP S/4 HANA
- Type: * User Credentials (dropdown menu)
- User: * (masked with a grey bar)
- Password: * (masked with dots)
- Repeat Password: * (masked with dots)

At the bottom right, there are 'Deploy' and 'Cancel' buttons.

- **Workflow** – (OAuth2 Client Credentials) To start the approval workflows in SAP Build Process Automation or SAP Workflow Management ([help documentation to determine the service configuration parameters](#)). Make sure that the process automation or workflow service instance was created with the following scopes - WORKFLOW_INSTANCE_START.

Note: The credential names can be different from what is mentioned above. Make sure that you configure the appropriate credential names in the integration flow's HTTP adapter configuration.

HTTP/OData Adapter and Timer Configuration

- Open the integration model *Create Workflow Instances for Dunning Notices*.
- Click **Configure** button, choose the appropriate receivers (SAP Build Process Automation or SAP_Workflow_Management_GET, SAP Build Process Automation or SAP_Workflow_Management_POST and SAP_S4HANA) and set their respective API endpoint, Proxy Type, Authentication and credential names.
- Go to Timer tab and set the date/time frequency for which the Dunning Notices are to be read by SAP Build Process Automation or SAP Workflow Management from SAP S/4HANA.
- Go to the More tab and configure additional parameters:
 - Lastruntime – Change the Lastruntime (if needed) to read only the Dunning Notices created after a specific date.
 - SAPClientNo – Enter the SAP Client No. to which OData will connect

- Open the integration model *Post Dunning Block Reason*.
- Click **Configure** button, choose the appropriate receivers (SAP_WorkflowService and SAP_S4HANA) and set their respective API endpoint and credential names.
The API endpoint for SOAP service JournalEntryBulkChangeRequest_In, it's binding and the SenderBusinessID of it's Outbound Service (Consumer Proxy) can be obtained from service registry in SOAMANAGER.

API endpoint and Service Binding details can be found by following the below path in SOAMANAGER:

Go to "SOAMANAGER" -> Go to "Service Registry" Tab -> Click on "Published Bindings" -> Search for the Binding Name which was defined during configuration of the SOAP service -> Click on the Binding Name -> The displayed "Access URL" is the required API endpoint (along with Binding Name embedded in the URL)

The "External System ID" created by following the section "Mapping Sender System and Logical Port" in below link is to be used as SenderBusinessID:

[Configuring APIs in SOA Manager - SAP Help Portal](#)

Configure "Post Dunning Block Reason"

Sender Receiver **More**

Receiver: SAP_S4HANA

Adapter Type: HTTP

Connection

Address: {{SOAP_URL}}/sap/bc/srt/xip/sap/{{SOAP_SERVICE_BINDING}}

SOAP_URL: http://[REDACTED].com:[REDACTED]

SOAP_SERVICE_BINDING: journalentrybulkchangerequest_[REDACTED]

Proxy Type: On-Premise

Authentication: Basic

Credential Name: S4HANA

Configure "Post Dunning Block Reason"

Sender Receiver **More**

Type: All Parameters

Datastore name: DunningBlock

SenderBusinessId: [REDACTED]

- Deploy the integration model.
- Open the integration model **Confirm Dunning Block**
- Click **Configure** button, choose the appropriate sender (SAP_Workflowservice) and set their respective User Role credentials.

Configure "Confirm Dunning Block"

The screenshot shows a configuration window with two tabs: 'Sender' (selected) and 'More'. Under the 'Sender' tab, there are four fields: 'Sender' (dropdown menu with 'SAP_Workflowservice' selected), 'Adapter Type' (dropdown menu with 'SOAP' selected), 'Address' (text input field with '/confirmDunningBlock'), and 'User Role' (text input field with 'ESBMessaging.send' and a 'Select' button next to it). The word 'Connection' is written in bold above the 'Address' and 'User Role' fields.

- Save and Deploy the integration model.
- Open the integration model **Check Invoice Payment**
- Click **Configure** button, choose the appropriate receivers (POST_SAP_WorkflowService) and set their respective API endpoint and credential names.
- Go to the **More** tab and configure additional parameters:

Configure "Check Invoice Payment"

The screenshot shows a configuration window with three tabs: 'Timer', 'Receiver', and 'More' (selected). Under the 'More' tab, there are two fields: 'Type' (dropdown menu with 'All Parameters' selected) and 'LastRunDate' (text input field with a greyed-out date). The word 'Timer' is written in bold above the 'Type' field.

- Save and Deploy the integration model.

- Similarly, configure any additional parameters as required in integration models and deploy them.

Note: In case the Approver Determination Strategy is selected as “External Service” in workflow configurations, then a cloud integration model needs to be implemented with the below mentioned endpoint, input and output details.

Endpoint: /getApproversCR

Input to the integration model from Workflow:

```
{
  "d":
  {
    "Dunning": $.context.Dunning,
    "Role": $.context.Role
  }
}
```

Output from the integration model to Workflow is an array of approver(s):

```
{
  "d": {
    "approvers": [
      {
        "supervisorEmail": "email@example.com",
        "email": "email@example.com",
        "userGroup": "Approver_GroupId",
        "userId": "Approver_UserId"
      },
      {
        "supervisorEmail": "email1@example.com",
        "email": "email1@example.com",
        "userGroup": "Approver_GroupId1",
        "userId": "Approver_UserId1"
      }
    ]
  }
}
```