

SAP BUSINESS TECHNOLOGY PLATFORM | EXTERNAL

Setup Guide

Fixed Asset Write-Off Approval using SAP Workflow Management or SAP Build Process Automation

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Overview

This document provides information about setting up the SAP Business Technology Platform account to consume the workflow content package **Fixed Asset Write-Off Approval**. The main audience of this document are technical IT/system administrators.

The Fixed Asset Write-Off Approval content package for SAP S/4HANA automates the approval process required when fixed assets are written off in an organization. An asset write off can happen due to various reasons like scrapping, intercompany transactions, retirement etc. In SAP, each of the asset write off scenario is posted against its specific type. The workflow bridges the gap between standard SAP S/4HANA process of asset write off with approval from the relevant cost center owner. In this workflow, a requestor can raise an asset write off choosing the relevant assets and trigger a workflow for approval. After appropriate user action, the posting is done on SAP S/4HANA

Salient features of this content package are:

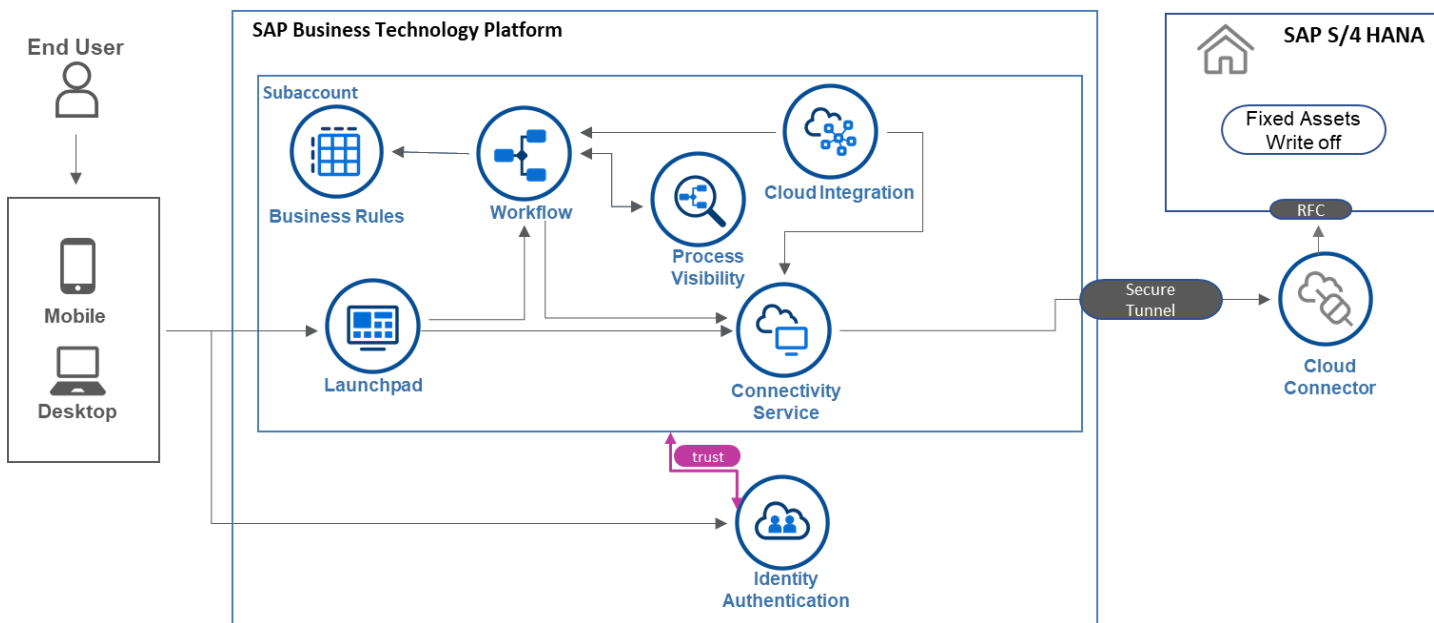
- Plug and Play with SAP S/4HANA without any additional development.
- Process steps delivered to approve a write off on organization assets
- Automatic email notification to parties involved.
- Business Rules provides flexibility in determining approver determination strategy and approvers
- Custom validation on approver determination strategy and other key attributes using Business.
- New variant of the process can be created using the pre-delivered process steps in a no-code / low-code approach
- Out-of-the-box visibility into key process performance indicators of the workflow

Required SAP Business Technology Platform Services

The workflow content package **Fixed Asset Write-Off 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 Fixed Asset 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.

The solution flow for this content package is:



Setup and Configuration

Fixed Asset Approval Write off 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 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 OAuth2ClientCredentials 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-... 19...

Client Secret: *****

Token Service URL Type: * Dedicated Common

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

Token Service User:

Token Service Password:

Additional Properties

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

Use default JDK truststore

Save Cancel

Configure OAuth2UserTokenExchange Destination

Configure a destination with the following parameters:

Name	sap_process_automation_workflow_useraction
Type	HTTP
Proxy Type	Internet
Authentication	OAuth2UserTokenExchange

URL	<"endpoints"."api">
Client ID	<"uaa":"clientis">
Client Secret	<"uaa":"clientsecret">
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](#).

Configure SAP Workflow Management

Fixed Asset Write-Off 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 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 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

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 Basic Authentication

Name	CPI
Type	HTTP
Proxy Type	Internet
Authentication	Basic Authentication
URL	<runtime.url>
Username	<user>
Password	<password>

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 S/4 HANA destination to connect with SAP S/4HANA.

Note: This destination is required by SAP Workflow Management as well as Cloud Platform

Integration.

Name	S4HANA
Type	HTTP
Proxy Type	On-Premise
User	<SAP S/4HANA_USER>
Password	<SAP S/4HANA_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/API_COMPANYCODE_SRV

/sap/opu/odata/sap/API_COSTCENTER_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 "API_COMPANYCODE_SRV" and click on "Get Services"
5. Select "API_COMPANYCODE_SRV" and click on "Add Selected Services"
6. Enter the required package and click on OK
7. Repeat steps 1 to 6 for Technical Service "API_COSTCENTER_SRV"

Create and Configure the Core Data Services to populate the Value Helps

The Custom Task UIs based on SAP UI5 uses a couple of backend services to populate the value helps for Asset Transaction Types and Depreciation Areas information.

Asset Transaction Type Value Help URL –

{S4HANA_Dest}/sap/opu/odata/sap/ZZ1_ASSETTRANSACTIONTYPE_CDS/ZZ1_AssetTransactionType

Depreciation Area Value Help URL –

{S4HANA_Dest}/sap/opu/odata/sap/ZZ1_DEPRAREAFORLEDGERVH_CDS/ZZ1_DeprAreaForLedgerVH

Create the necessary Custom CDS Views in your SAP S/4HANA system to use the Live Process Package. Refer to the **Appendix** for more details

Configure RFC Destination

Configure a RFC destination to connect with SAP S/4HANA on-premise. Below is a destination configuration for **SAP S/4HANA**.

Note: This destination is required by Cloud Platform Integration.

Name	<RFC_DESTINATION_NAME>
Type	RFC
Proxy Type	OnPremise
User	<SAP S/4HANA_USER>
Password	<SAP S/4HANA_PASSWORD>
Repository User	<SAP S/4HANA_USER>
Repository Password	<SAP S/4HANA_PASSWORD>

Additional Properties	jco.client.ashost: <host>
Additional Properties	jco.client.client:<client number>
Additional Properties	jco.client.lang: <language>
Additional Properties	jco.client.sysnr:<system number >

Configure Cloud Connector

For SAP S/4HANA 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 using Cloud Connector

Resources	Protocol	Backend-Type
/sap/opu/odata/sap/API_COMPANYCODE_SRV	HTTPS	ABAP System
/sap/opu/odata/sap/API_COSTCENTER_SRV	HTTPS	ABAP System
/sap/opu/odata/sap/ZZ1_ASSETTRANSACTIONTYPE_CDS	HTTPS	ABAP System
/sap/opu/odata/sap/ZZ1_DEPRAREAFORLEDGERVH_CDS	HTTPS	ABAP System
BAPI_ASSET_RETIREMENT_POST	RFC	ABAP System
BAPI_ASSET_REVALUATION_POST	RFC	ABAP System
BAPI_ASSET_VALUE_ADJUST_POST	RFC	ABAP System
BAPI_FIXEDASSET_GETLIST	RFC	ABAP System
BAPI_USER_GET_DETAIL	RFC	ABAP System
BAPI_TRANSACTION_COMMIT	RFC	ABAP System

BAPI_TRANSACTION_ROLLBACK	RFC	ABAP System
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Import, configure and deploy cloud integration content

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 Fixed Asset Approval Write Off”.

Configure SAP Central Fiori Launchpad Site for SAP Workflow Management

Configure Fiori Launch Pad site to access Workflow Monitoring applications, My Inbox, Process Visibility Workspace and Start UI application to create approval requests.

Please refer help documentation [how to configure a Start UI tiles on Central Fiori Launchpad](#).

Deploy Custom UIs and Workflow module

The project consists of the following:

- FAWriteOffStartUI HTML5 module – serves as the Workflow Start User Interface application for creation of FA Write Off
- FAWriteOfftaskUI HTML5 module – serves as the Workflow Task User Interface application for processing FA Write Off requests by Approver.

Add Workflow start UI in Fiori Launchpad Site

- Open SAP Launchpad site manager application.
- Select Content Manager and Content Explorer
- Search com.sap.FAWriteOffStartUIModule and select SAP UI5 component.
- Click Add to My Content button to include the UI5 component.
- Select My Content tab and Search Everyone.
- Click Everyone from the result and navigate to the details.
- Click Edit button to enable all users to access the new Start UI tile.

<

ROLE

Everyone

Edit
Delete

PROPERTIES
TRANSLATION

General

Additional Info

- Search for Document and select Fixed Asset Write Off
- Click the + button and Save the changes.

<

ROLE

Everyone

Save
Cancel

PROPERTIES
TRANSLATION

General

Title: *

ID ⓘ

Additional Info

Created:

Jul 8, 2021, 1:18:57 PM

Created By:

technical user

Assignments
>>

Assign Items:

X
Q

Results (1/1)

A

Fixed Asset Write Off

HTML5 Apps

X

- Click New button and Select Group to create a new group.

Item Type:

All items
v

Show Selected

Clear

↓

↑

Explore

+ New

Description	ID	Provider
Item assigned to this role is visible...	sap_subaccount_everyone	Local

A

App

□

Catalog

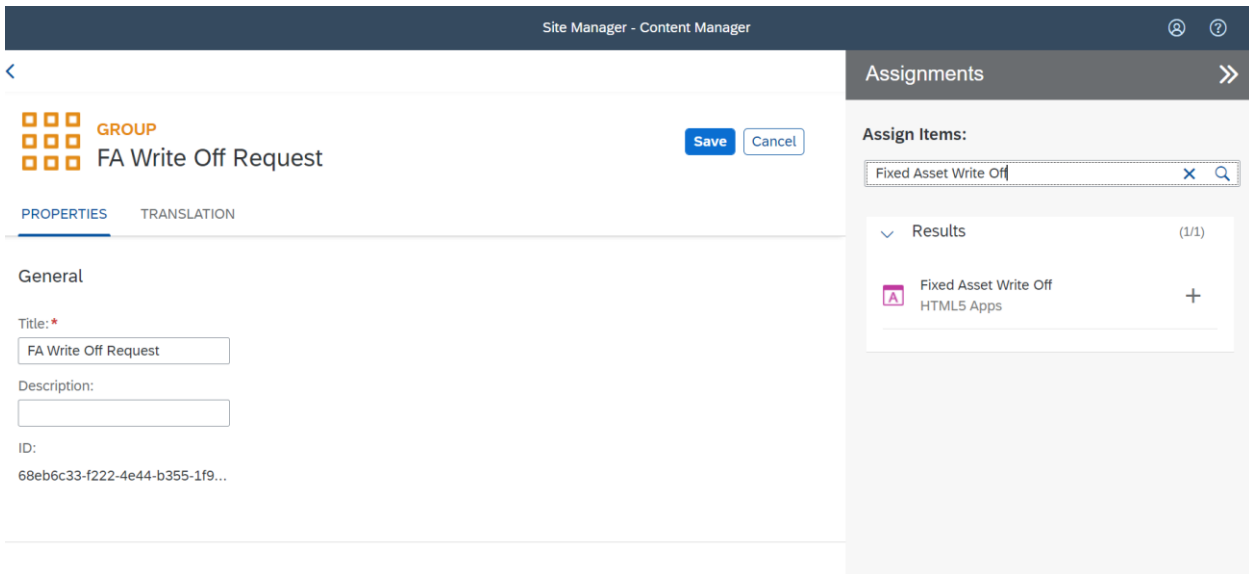
□

Group

□

Role

- Add a Title for eg: FA Write Off Request under PROPERTIES.
- Search Document and Select Fixed Asset Write Off.
- Click + button and Save button.



Appendix

To get the list of Asset Transaction Types and Depreciation Values from SAP S/4HANA, we are going to create a Custom CDS Views.

Pre-requisite

You have the necessary tools and rights to create Custom Core Data Service Views. Please refer to the following - [SAP HANA Core Data Services \(CDS\) Reference](#)

Create Custom CDS View for Asset Transaction Type

Procedure

1. Create a Custom CDS View with the Name ZZ1_ASSETTRANSACTIONTYPE ZZ1_AssetTransactionType (CDS Name is case-sensitive) and Label "AssetTransactionType".
2. Select Scenario "External API"
3. Choose Add > Add Primary Data Source.
4. Choose the data source with the name "I_AssetTransactionType".
5. Choose Save Draft.
6. Choose Elements tab.
7. Select the fields as listed in below screenshot (Click on Add -> Elements if the fields are not selected by default)

Key	Alias	Type	Path	Label	Calculation	Status
<input type="checkbox"/>	AssetTransactionType	CHAR (3)	I_AssetTransactionType.AssetTransactionType	Transaction Type		<input checked="" type="checkbox"/>
<input type="checkbox"/>	Language	LANG (1)	I_AssetTransactionType._Text.Language	Language Key		<input checked="" type="checkbox"/>
<input type="checkbox"/>	AssetTransactionTypeGroup	CHAR (2)	I_AssetTransactionType.AssetTransactionTypeGroup	Transaction Type Grp		<input type="checkbox"/>
<input type="checkbox"/>	AssetTransactionTypeName	CHAR (50)	I_AssetTransactionType._Text.AssetTransactionTypeName	Trans. Type Name		<input type="checkbox"/>

8. Choose Publish.

Create Custom CDS View for Depreciation Areas

Procedure

1. Create a Custom CDS View with the Name ZZ1_DeprAreaForLedgerVH (CDS Name is case-sensitive) and Label "DeprAreaForLedgerVH".
2. Select Scenario "External API"
3. Choose Add > Add Primary Data Source.
4. Choose the data source with the name "I_DepreciationAreaForLedger".
5. Choose Save Draft.
6. Choose Elements tab.
7. Select the fields as listed in below screenshot (Click on Add -> Elements if the fields are not selected by default)

<input type="checkbox"/>	Key	Alias	Type	Path	Label	Calculation	Status
<input type="checkbox"/>	<input checked="" type="radio"/>	CompanyCode	CHAR (4)	I_DepreciationAreaForLedger.CompanyCode	Company Code		
<input type="checkbox"/>	<input checked="" type="radio"/>	Ledger	CHAR (2)	I_DepreciationAreaForLedger.Ledger	Ledger		
<input type="checkbox"/>	<input checked="" type="radio"/>	AssetDepreciationArea	NUMC (2)	I_DepreciationAreaForLedger.AssetDepreciationArea	Depreciation Area		
<input type="checkbox"/>	<input type="radio"/>	Language	LANG (1)	I_DepreciationAreaForLedger._Text.Language	Language Key		
<input type="checkbox"/>	<input type="radio"/>	AssetDepreciationArea_Text	CHAR (50)	I_DepreciationAreaForLedger._Text.AssetDepreciationAreaName	Dep. Area Name		

8. Choose Publish.

Setup OData services for Custom CDS views

Procedure

1. Login into SAP GUI
2. Go to t-code "/IWFND/MAINT_SERVICE"
3. Click on "Add Service"
4. Select the required System Alias
5. Enter Technical Service Name as "ZZ1_ASSETTRANSACTIONTYPE_CDS" and click on "Get Services"
6. Select "ZZ1_ASSETTRANSACTIONTYPE_CDS" and click on "Add Selected Services"
7. Enter the required package and click on OK
8. Repeat steps 2 to 7 for Technical Service "ZZ1_DEPRAREAFORLEDGERVH_CDS"