

SAP BUSINESS TECHNOLOGY PLATFORM | EXTERNAL

Setup Guide

Fixed Asset Acquisition Approval using SAP Workflow Management or SAP Build Process Automation

Table of Contents

Table of Contents	2
Overview.....	3
Features	3
Solution Diagram.....	3
Required SAP BTP Services	4
Setup and Configuration	5
Configure SAP Build Process Automation.....	5
Configure Process Automation Destination.....	5
Configure SMTP Mail Destination	5
Configure OAuth2ClientCredentials SAP Build Process Automation Destination (Service Instance).....	5
Configure OAuth2UserTokenExchange Destination	6
Configure SAP Workflow Management.....	7
Configure Workflow Email Destination	7
Configure OAuth2ClientCredentials Workflow Destination	7
Configure OAuth2ClientCredentials Business Rules Destination.....	8
Configure Destination to Enable Start & Step Conditions	8
Configure OAuth2 Client Credentials Workflow Destination (Service Instance)	8
Configure Cloud Integration Destination	10
Additional properties will remain the same between authentication methods.	10
Configure APIs in SAP S/4HANA	10
Create and Configure the Core Data Services to populate the Value Helps	11
Configure RFC Destination.....	12
Configure Cloud Connector	13
Configure Document Management Service Repository	13
Configure Document Management Service Destination	15
Add Workflow start UI in Fiori Launchpad Site	15
Import, configure and deploy cloud integration content	16
Appendix.....	17

Overview

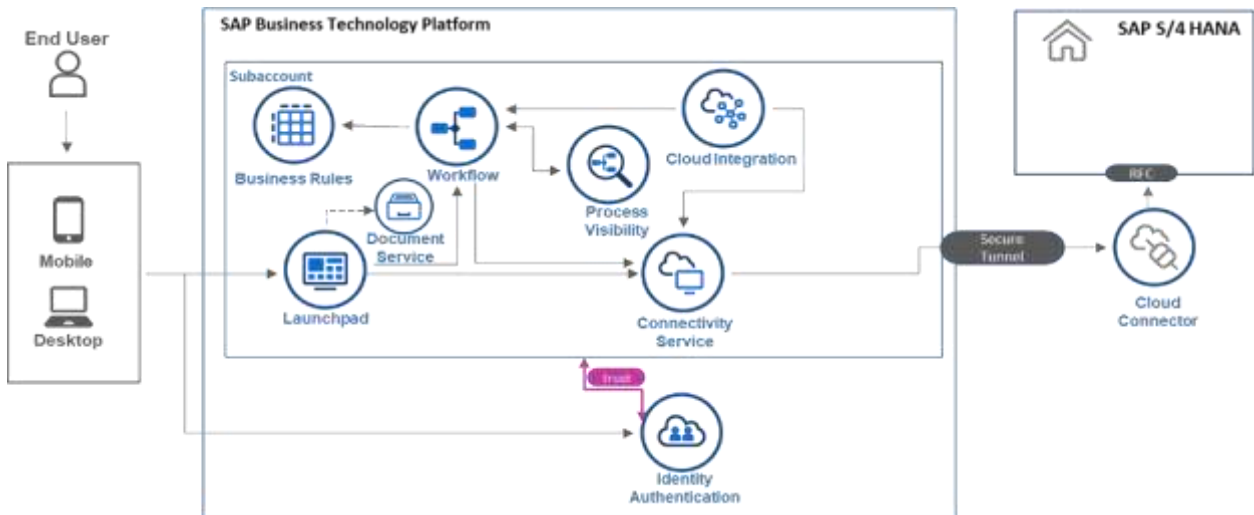
This document provides information about setting up the SAP Business Technology Platform account to consume the workflow content package **Fixed Asset Acquisition Approval**. The main audience of this document are technical IT/system administrators.

Fixed asset acquisition transactions are usually high value items which should not get posted in the SAP S/4HANA system without notice. This workflow will help business in obtaining approvals for Acquiring of Fixed assets based on Approval determination. This helps better governance.

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 BTP Services

The workflow content package **Fixed Asset Acquisition 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 SAP S/4HANA
- 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

Fixed Asset Acquisition 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 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	OAuth2ClientCredentials
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>.

The image shows two screenshots of the SAP Destination Configuration wizard. The top screenshot is the 'Service Instance' tab, showing the following fields: Service Instance (sap_processautomation), Name (process_automation_service_destination), and Description (Call SAP Process Automation APIs using a service route). The bottom screenshot is the 'Additional Properties' tab, showing the following fields: 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 (unchecked), Client ID (sb-...), Client Secret (*****), Token Service URL Type (Dedicated), Token Service URL (https://...), Token Service User, and Token Service Password. The 'Additional Properties' section on the right includes endpoints, html5-apps..., saasregistry..., sap.cloud.s..., and sap.cloud.s... with their respective values.

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 Acquisition 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

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 (supported only for Neo environment) 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

Destination with Basic Authentication (Applicable for Neo environment only)

Name	CPI
Type	HTTP
Proxy Type	Internet
User	<USER ID>
Password	<PASSWORD>
Authentication	BasicAuthentication
URL	<runtime.url>

Additional properties will remain the same between authentication methods.

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
/sap/opu/odata/sap/ZZ1_ASSETSUBNUM_CDS
/sap/opu/odata/sap/ZZ1_ACCOUNTINGPRINCIPLE_CDS
/sap/opu/odata/sap/ZZ1_DEPRECIATIONAREASVH_CDS
/sap/opu/odata/sap/ZZ1_ASSETTRANSACTIONTYPE_CDS
/sap/opu/odata/sap/ZZ1_ASSETCLASSVH_CDS
/sap/opu/odata/sap/ZZ1_ASSETASSIGNMENT_CDS
/sap/opu/odata/sap/ZZ1_DEPRAREAFORLEDGERVH_CDS
/sap/opu/odata/sap/ZZ1_UNITOFMEASURE_CDS

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 1-6 for all the OData services mentioned in previous section

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

BAPI_ASSET_ACQUISITION_POST – To Post Fixed Asset Acquisitions
BAPI_TRANSACTION_COMMIT – To Commit Acquisitions
BAPI_TRANSACTION_ROLLBACK – To Roll Back Acquisitions
BAPI_USER_GET_DETAIL – To Get E-mail-ID of Cost Center Owner
ZWF_FM_HR_MASTER_GET_APPR_MULT – Fetch Approver Details

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

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 WBS Element, Order, Ledger Group and Transaction Currency information.

Asset Sub No Value Help URL –
{S4HANA}/sap/opu/odata/sap/ZZ1_ASSETSUBNUM_CDS/ZZ1_AssetSubNum

Accounting Principle Value Help URL –
{S4HANA}/sap/opu/odata/sap/ZZ1_ACCOUNTINGPRINCIPLE_CDS/ZZ1_AccountingPrinciple

Depreciation Areas (based on selected asset) Value Help URL –
{S4HANA}/sap/opu/odata/sap/ZZ1_DEPRECIATIONAREASVH_CDS/ZZ1_DepreciationArea

sVH

AssetTransactionType Value Help URL –

{S4HANA}/sap/opu/odata/sap/ZZ1_ASSETTRANSACTIONTYPE_CDS/ZZ1_AssetTransactionType

Asset Class Value Help URL –

{S4HANA}/sap/opu/odata/sap/ZZ1_ASSETCLASSVH_CDS/ZZ1_AssetClassVH

Depreciation Areas Value Help URL –

{S4HANA}/sap/opu/odata/sap/ZZ1_DEPRAREAFORLEDGERVH_CDS/ZZ1_DeprAreaForLedgerVH

OData URL to get Cost Center of existing asset –

{S4HANA}/sap/opu/odata/sap/ZZ1_ASSETASSIGNMENT_CDS/ZZ1_AssetAssignment

Unit Value Help URL -

{S4HANA}/sap/opu/odata/sap/ZZ1_UNITOFMEASURE_CDS/ZZ1_UnitOfMeasure

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 on-premise*.

Note: This destination is required by Cloud Integration (Suite).

Name	<RFC_DESTINATION_NAME>
Type	RFC
Proxy Type	OnPremise
User	<ONPREMISE_USER>
Password	<ONPREMISE_PASSWORD>
Repository User	<ONPREMISE_USER>
Repository Password	<ONPREMISE_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

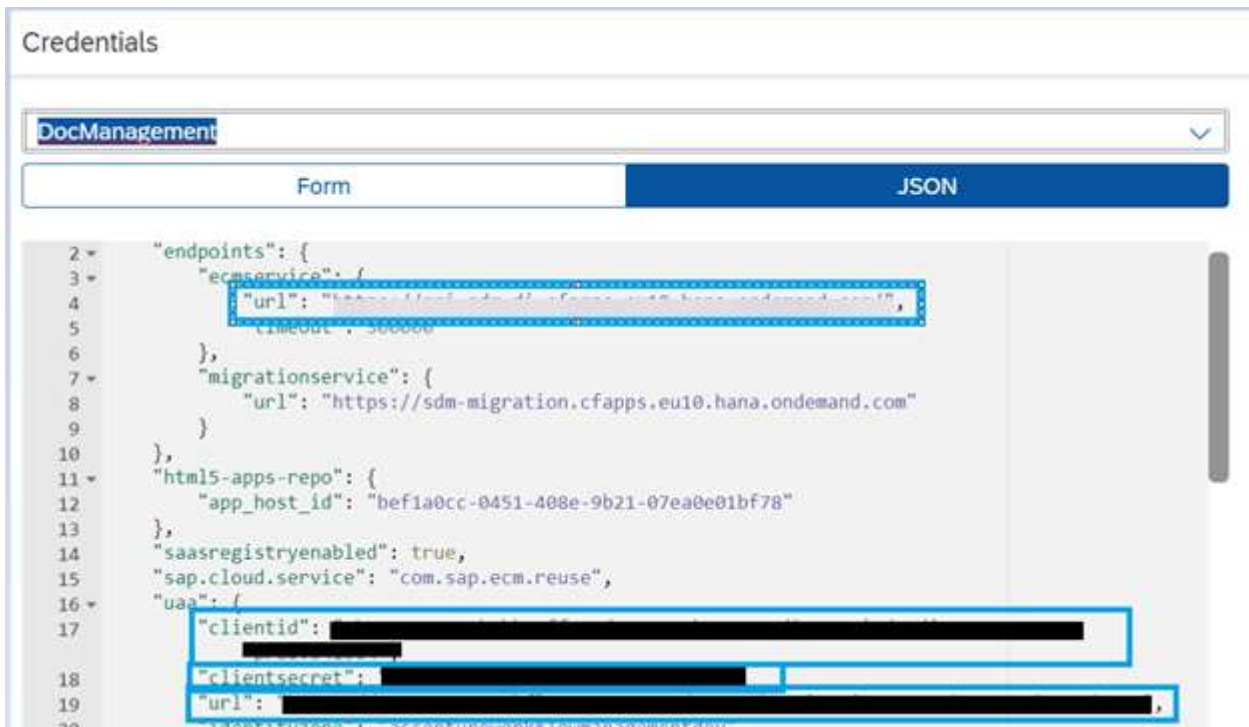
For SAP S/4HANA on-premise landscape, configure cloud connector to enable secure tunnel to SAP BTP tenant. Please refer the help documentation to [configure Cloud Connector](#).

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

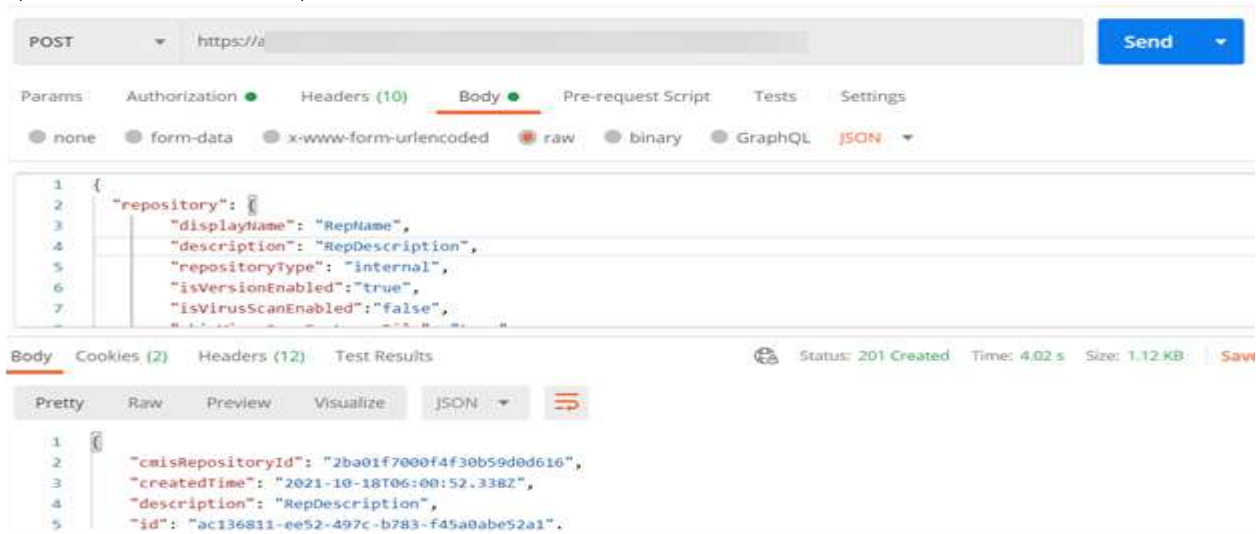
Resources	Protocol	Backend-Type
BAPI_USER_GET_DETAIL	RFC	ABAP System
ZWF_FM_HR_MASTER_GET_APPR_MULT	RFC	ABAP System
BAPI_ASSET_ACQUISITION_POST	RFC	ABAP System
BAPI_TRANSACTION_COMMIT	RFC	ABAP System
BAPI_TRANSACTION_ROLLBACK	RFC	ABAP System
/sap/opu/odata/sap/API_COMPANYCODE_SRV	OData	ABAP System
/sap/opu/odata/sap/API_COSTCENTER_SRV	OData	ABAP System
/sap/opu/odata/sap/ZZ1_ASSETSUBNUM_CDS	OData	ABAP System
/sap/opu/odata/sap/ZZ1_ACCOUNTINGPRINCIPLE_CDS	OData	ABAP System
/sap/opu/odata/sap/ZZ1_DEPRECIATIONAREASVH_CDS	OData	ABAP System
/sap/opu/odata/sap/ZZ1_ASSETTRANSACTIONTYPE_CDS	OData	ABAP System
/sap/opu/odata/sap/ZZ1_ASSETCLASSSVH_CDS	OData	ABAP System
/sap/opu/odata/sap/ZZ1_DEPRAREAFORLEDGERVH_CDS	OData	ABAP System
/sap/opu/odata/sap/ZZ1_ASSETASSIGNMENT_CDS	OData	ABAP System
/sap/opu/odata/sap/ZZ1_UNITOFMEASURE_CDS	OData	ABAP System

Configure Document Management Service Repository

Create a service instance for Document Management Service, Integration Option. Next create a service key and a repository for storing workflow attachments. Necessary information for creating a repository can be found in the service key.



After sending a POST request, you will receive response like below. Note down “id” as this is required in the next step.



For more information for creation of root Document Management Service repository please follow the steps described in [Initial Setup for Document Management](#), [Integration Option](#) and [Connect to Document Management, Repository Option](#) Using API (incl. Prerequisites). Save generated Repository ID from the response.

Configure Document Management Service Destination

Configure a Document Management Service destination with the following parameters:

Name	bpmworkflowruntime_attachments
Type	HTTP
Proxy Type	Internet
Authentication	OAuth2UserTokenExchange
URL	<"endpoints":"ecmservice":"url">/browser/ <Repository_ID>/root/
Token Service URL	<"uaa":"url">/oauth/token
Token Service URL Type	Dedicated

Populate Client ID and Client Secret with the values from the Service Key created on the previous step (see [Create Service Keys Using the Cockpit](#)).

For more information refer to [Create HTTP Destinations](#) and [OAuth User Token Exchange Authentication](#). Make sure that the users which are going to use the application have "SDM_Admin" or "SDM_User" roles assigned to them.

Add Workflow start UI in Fiori Launchpad Site

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:

- AssetAcquisition HTML5 module – serves as the Workflow Start User Interface application for creation of Fixed Asset Acquisition requests

Configure Asset Acquisition tile on Central Fiori Launchpad Site

- Open SAP Launchpad site manager application.
- Select Content Manager and Content Explorer
- Search **com.sap.assetacquisition.AssetAcquisitionStartUIModule** 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.

- Click New button and Select Group to create a new group.
- Add a Title for eg: Asset Acquisition under PROPERTIES.
- Click + button and Save button.

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 Acquisition Approval”.

Note: If Approver Determination Strategy is selected as “External Service” in workflow configurations, then a CPI iFlow *Get Approvers for Asset Acquisition Approval* with the below mentioned endpoint, input and output details will be called to get the required approver details. In case there is a need for implementation of custom CPI iFlow then the same needs to have the below mentioned endpoint, input and output structure.

API Attributes	Values
Path	/http/getApproversfaaawfm
HTTP Method	POST
Payload sent by workflow (sample data)	<pre>{ "d": { "positions": [{ "companyCode": "4001", "positionID": "50000508" }, { "companyCode": "4001", "positionID": "50000509" }] } }</pre>
Response Payload from integration flow	<p>RESPONSE STATUS, Ex 200 OK</p> <pre>{ "d": {</pre>

	<pre> "status": "Success", "message": "Data fetched successfully", "approvers": [{ "userID": "ABC", "emailID": "abc@abc.com", "name": "ABC ABC", "companyCode": "4001", "positionID": "50000508" }, { "userID": "XYZ", "emailID": "xyz@xyz.com", "name": "XYZ XYZ", "companyCode": "4001", "positionID": "50000509" }] } </pre>
Payload Type	Application / JSON

Appendix

Perform the below mentioned steps for implementation of custom ABAP objects

To get the list of F4 Help Values from SAP S/4HANA, we are going to create a Custom CDS Views.

Create Custom CDS Views (using In-App Extensibility)

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](#)

Steps:

1. Create a Custom CDS View with the Name ZZ1_AssetSubNum (CDS Name is case-sensitive) and Label "Asset Sub No".
2. Select Scenario "External API"
3. Choose Add > Add Primary Data Source.
4. Choose the data source with the name "I_FixedAsset".
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
Yes	CompanyCode	CHAR (4)	I_FixedAsset.CompanyCode	Company Code
Yes	MasterFixedAsset	CHAR (12)	I_FixedAsset.MasterFixedAsset	Asset
Yes	FixedAsset	CHAR (4)	I_FixedAsset.FixedAsset	Sub-number
No	FixedAssetDescription	CHAR (50)	I_FixedAsset.FixedAssetDescription	Description
No	AssetClass	CHAR (8)	I_FixedAsset.AssetClass	Asset Class
No	AssetDeactivationDate	DATS (8)	I_FixedAsset.AssetDeactivationDate	Deactivation on

8. Choose Publish.

Similarly, repeat steps 1-8 for the below listed CDS views.

Accounting Principle Value Help URL –

{S4HANA}/sap/opu/odata/sap/ZZ1_ACCOUNTINGPRINCIPLE_CDS/ZZ1_AccountingPrinciple

Key	Alias	Type	Path	Label
Yes	Language	LANG (1)	I_AccountingPrincipleText.Language	Language Key
Yes	AccountingPrinciple	CHAR (4)	I_AccountingPrincipleText.AccountingPrinciple	Accounting Principle
No	AccountingPrincipleName	CHAR (70)	I_AccountingPrincipleText.AccountingPrincipleName	Name of AP

Depreciation Areas (based on Asset) Value Help URL –
[{S4HANA}/sap/opu/odata/sap/ZZ1_DEPRECIATIONAREASVH_CDS/ZZ1_DepreciationAreaSVH](#)

Key	Alias	Type	Path	Label
Yes	CompanyCode	CHAR (4)	I_AssetValuationForLedger.Com panyCode	Company Code
Yes	MasterFixedAsset	CHAR (12)	I_AssetValuationForLedger.Mast erFixedAsset	Asset
Yes	FixedAsset	CHAR (4)	I_AssetValuationForLedger.Fixed Asset	Sub- number
Yes	Ledger	CHAR (2)	I_AssetValuationForLedger.Ledg er	Ledger
Yes	AssetRealDepreciationA rea	NUMC (2)	I_AssetValuationForLedger.Asset RealDepreciationArea	Depreciati on Area
Yes	ValidityEndDate	DATS (8)	I_AssetValuationForLedger.Validi tyEndDate	Valid To
Yes	Language	LANG (1)	I_AssetValuationForLedger._Dep reciationArea._Text.Language	Language Key
No	AssetDepreciationAreaN ame	CHAR (50)	I_AssetValuationForLedger._Dep reciationArea._Text.AssetDeprec iationAreaName	Dep. Area Name

AssetTransactionType Value Help URL –
[{S4HANA}/sap/opu/odata/sap/ZZ1_ASSETTRANSACTIONTYPE_CDS/ZZ1_AssetTransacti
onType](#)

Key	Alias	Type	Path	Label
Yes	AssetTransactionType	CHAR (3)	I_AssetTransactionType.Ass etTransactionType	Transaction Type
Yes	Language	LANG (1)	I_AssetTransactionType._Te xt.Language	Language Key
No	AssetTransactionTypeGrou p	CHAR (2)	I_AssetTransactionType.Ass etTransactionTypeGroup	Transaction Type Grp
No	AssetTransactionTypeNam e	CHAR (50)	I_AssetTransactionType._Te xt.AssetTransactionTypeNa me	Trans. Type Name

Asset Class Value Help URL –
[{S4HANA}/sap/opu/odata/sap/ZZ1_ASSETCLASSVH_CDS/ZZ1_AssetClassVH](#)

Key	Alias	Type	Path	Label
Yes	AssetClass	CHAR (8)	I_AssetClassText.AssetClass	Asset Class
Yes	Language	LANG (1)	I_AssetClassText.Language	Language Key
No	AssetClassName	CHAR (20)	I_AssetClassText.AssetClass Name	Asset Class Name
No	AssetClassDescription	CHAR (50)	I_AssetClassText.AssetClass Description	Class Descript.

Depreciation Area Value Help URL –

{S4HANA}/sap/opu/odata/sap/ZZ1_DEPRAREAFORLEDGERVH_CDS/ZZ1_DeprAreaForLedgerVH

Key	Alias	Type	Path	Label
Yes	CompanyCode	CHAR (4)	I_DepreciationAreaForLedger .CompanyCode	Company Code
Yes	Ledger	CHAR (2)	I_DepreciationAreaForLedger .Ledger	Ledger
Yes	AssetDepreciationArea	NUMC (2)	I_DepreciationAreaForLedger .AssetDepreciationArea	Depreciation Area
Yes	Language	LANG (1)	I_DepreciationAreaForLedger ._Text.Language	Language Key
No	AssetDepreciationArea_Text	CHAR (50)	I_DepreciationAreaForLedger ._Text.AssetDepreciationAreaName	Dep. Area Name

Asset Assignment Value Help URL –

{S4HANA}/sap/opu/odata/sap/ZZ1_ASSETASSIGNMENT_CDS/ZZ1_AssetAssignment

Key	Alias	Type	Path	Label
Yes	CompanyCode	CHAR (4)	I_FixedAssetAssgmt.CompanyCode	Company Code
Yes	MasterFixedAsset	CHAR (12)	I_FixedAssetAssgmt.MasterFixedAsset	Asset
Yes	FixedAsset	CHAR (4)	I_FixedAssetAssgmt.FixedAs	Sub-number

s			set	
Yes	ValidityEndDate	DATS (8)	I_FixedAssetAssgmt.ValidityEndDate	Valid to
No	CostCenter	CHAR (10)	I_FixedAssetAssgmt.CostCenter	Cost Center

Unit of Measure Value Help URL –

{S4HANA}/sap/opu/odata/sap/ZZ1_UNITOFMEASURE_CDS/ZZ1_UnitOfMeasure

Key	Alias	Type	Path	Label
Yes	UnitOfMeasure	UNIT (3)	I_UnitOfMeasureStdVH.UnitOfMeasure	Unit of Measure
No	UnitOfMeasureLongName	CHAR (30)	I_UnitOfMeasureStdVH.UnitOfMeasureLongName	UoM Text
No	UnitOfMeasureDimensionName	CHAR (20)	I_UnitOfMeasureStdVH.UnitOfMeasureDimensionName	Dimension text
No	UnitOfMeasureDimension	CHAR (6)	I_UnitOfMeasureStdVH.UnitOfMeasureDimension	Dimension

Register OData Services in SAP Gateway

Steps:

1. Go to t-code "/IWFND/MAINT_SERVICE"
2. Click on "Add Service"
3. Select the required System Alias
4. Enter Technical Service Name as "ZZ1_SUBASSETNUM_CDS" and click on "Get Services"
5. Select "ZZ1_SUBASSETNUM_CDS" and click on "Add Selected Services"
6. Enter the required package and click on OK

Repeat steps 1 to 6 for Technical Services listed below

ZZ1_ACCOUNTINGPRINCIPLE_CDS
ZZ1_DEPRECIATIONAREASVH_CDS
ZZ1_ASSETTRANSACTIONTYPE_CDS
ZZ1_ASSETCLASSVH_CDS
ZZ1_DEPRAREAFORLEDGERVH_CDS
ZZ1_ASSETASSIGNMENT_CDS
ZZ1_UNITOFMEASURE_CDS

Creating Function Group

Steps:

1. Go to t-code "SE37"
2. In Menu, select Go to -> Function Groups -> Create Group
3. Enter Function Group name as "ZWF_FG_UTIL_BTPWF" and 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_UTIL_BTPWF" as the name of function group and click on Display button

7. Click on Save
8. Right click on the Function Group “ZWF_FG_UTIL_BTPWF “ on the left side panel and “Click on Activate” (Click OK button on the pop-up which shows list of inactive objects)

Creating Function Modules

1) ZWF_FM_HR_MASTER_GET_APPR_MULT

Steps:

1. Go to t-code “SE37”
2. Click on “Create” button
3. Enter “ZWF_FM_HR_MASTER_GET_APPR_MULT” as name of Function Module
4. Enter “ZWF_FG_UTIL_BTPWF” as Function Group
5. Enter a meaningful short text
6. Click on “Save” (Click on OK in successive pop-ups)
7. Go to “Import” tab and enter the below mentioned entries

Parameter Name	Typing	Associated Type	Default value	Opti...	Pass...	Short text	Long...
I_INPUT	TYPE	ZWF_IP_APPR_T		<input type="checkbox"/>	<input checked="" type="checkbox"/>	Table Type for input of data to get approver data	Create

8. Go to “Export” tab and create the below entries

Parameter Name	Typing	Associated Type	Pass by Val...	Short text	Long Text
E_OUTPUT	TYPE	Zwf_APPR_DET_MVL_T	<input checked="" type="checkbox"/>	Table type for Approver Details	Create
E_STATUS	TYPE	BAPI_MTYPE	<input checked="" type="checkbox"/>	Message type: S Success, E Error, W Warning, I I...	Create

9. Go to “Source Code” tab and paste the attached code for “ZWF_FM_HR_MASTER_GET_APPR_MULT” from [SAP NOTE 3157200](#)
10. Go to “Attributes” tab and select radio button for “Remote-Enabled”
11. Click on “Save”
12. Click on “Activate” (Click OK button on the pop-up which shows list of inactive objects)

Note: The details of required “Associated Type” (Table Type) used in the Tables tab are mentioned below:

Table Type: Active

Short text:

Attributes Line Type Initialization and Access Primary Key Secondary Key

Line Type

Built-in type

Data Type:

No. of Characters: Decimal Places:

Structure: Active

Short Description:

Attributes Components Input Help/Check Currency/quantity fields

Component	Typing Method	Component Type	Data Type	Length	Decimal...	Coordinate	Short Description
<input type="checkbox"/> COMPANYCODE	Types	▼ BUKRS	CHAR	4	0		0 Company Code
<input type="checkbox"/> POSITION	Types	▼ PLANS	NUMC	8	0		0 Position

Table Type: Active

Short text:

Attributes Line Type Initialization and Access Primary Key Secondary Key

Line Type

Built-in type

Data Type:

No. of Characters: Decimal Places:

Structure: Active

Short Description:

Attributes Components Input Help/Check Currency/quantity fields

Component	Typing Method	Component Type	Data Type	Length	Decimal...	Coordinate	Short Description
<input type="checkbox"/> USER_ID	Types	▼ SYSDID	CHAR	30	0		0 Communication Identification/Number
<input type="checkbox"/> ENAME	Types	▼ ENNAM	CHAR	40	0		0 Formatted Name of Employee or Applicant
<input type="checkbox"/> EMAIL_ID	Types	▼ COMM_ID_LONG	CHAR	241	0		0 Communication: Long Identification/Number
<input type="checkbox"/> BUKRS	Types	▼ BUKRS	CHAR	4	0		0 Company Code
<input type="checkbox"/> PLANS	Types	▼ PLANS	NUMC	8	0		0 Position