

SAP BUSINESS TECHNOLOGY PLATFORM | EXTERNAL

## Configuration Guide

# Manage Asset Retirement using SAP Build Process Automation or SAP Workflow Management

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## Overview

This document provides information about the configuration steps for workflow content package “**Manage Asset Retirement**”. Developers, Product Owners, IT/system administrators are the target users of this document.

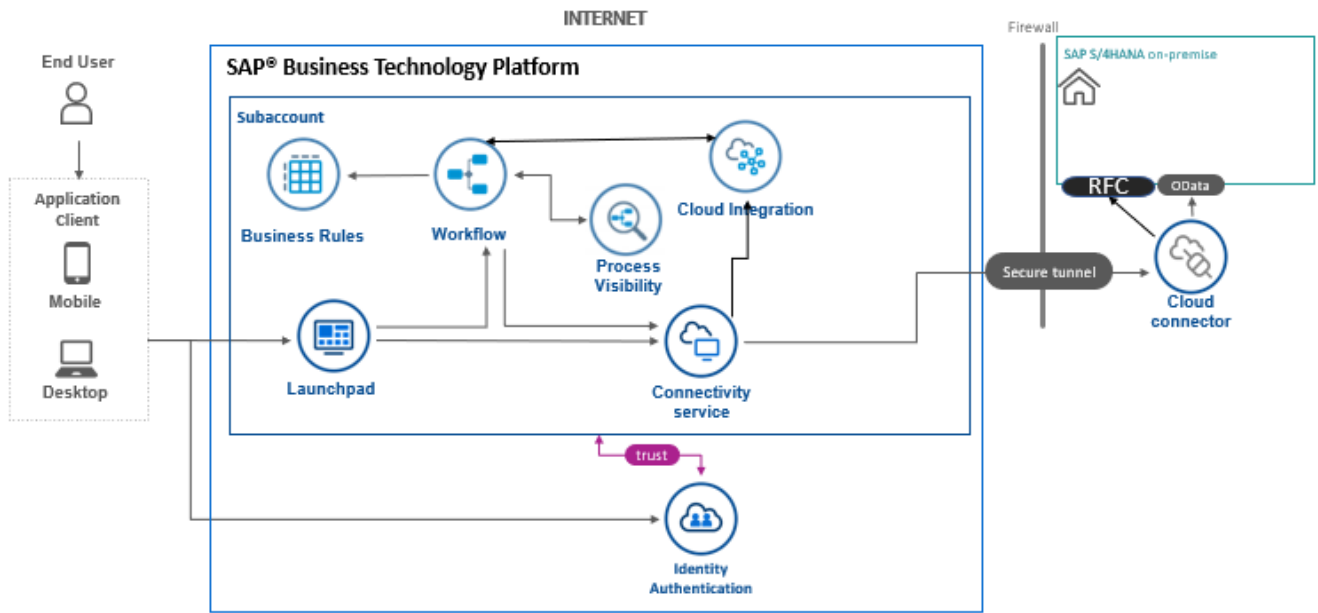
Manage Asset Retirement enables the customer to automate the deactivation of equipment, work orders, notifications, maintenance plans and retirement of asset. Notification requests for asset retirement is created from an UI5 application, post which is submitted for approval. After all the approvals are completed, deactivation process begins. There is a provision to set up variants wherein the levels of approval needed for the process can be configured. When a requestor creates a notification request for asset retirement, a preconfigured process variant is triggered in SAP Build Process Automation or SAP Workflow Management based on configurable business conditions.

### Salient features of the content package are:

- Easily deployable package from SAP Build Process Automation or SAP BTP Workflow Management Service with minimal developments in SAP S/4HANA system.
- Configure multi-level approval based on various parameters like Company Code, Asset Net Book value, Plant, Approval Level, Cost Center etc.
- Approvers are determined using a configurable business rule.
- Provisioned with a Process admin flow which get triggered in case of process exceptions.
- Exception handling during the Deactivation process to notify the Requestor for corrective measures.

***Disclaimer: Please note that this content package is a template to facilitate custom build extensions. A full-fledged master data management solution, with data quality management and governance capabilities is available on SAP Business Technology Platform, please see [SAP Master Data Governance](#).***

Solution Diagram



# Live Process Artifacts

A content package consists of process templates, process steps, workflow form UI, process variants, decisions, and process visibility models. Please refer [help documentation](#) about these artifacts.

## Process

A process template is a set of business activities and tasks that, once completed, fulfills an organization goal. The Manage Asset Retirement package contains the following process template:

**Manage Asset Retirement Request** – Establishes an approval process for an Asset Retirement Notification Request created in SAP S/4HANA. It includes 2 process steps for easy no-code/low-code process configuration.

A business process can be broken down logically into smaller parts or steps. Each process step is a collection of activities to perform a specific task. For example, an approval process step can contain an activity to determine the approvers, an approval task itself, handle the approval result. Table 1 represents the list of process steps available to be used in manage asset retirement process.

Table 1. Process Steps

Process Steps	Cardinality	Detailed Description
Approve Asset Retirement Request	1..5	This step has activities to initiate and complete one level of approval for asset retirement. A maximum of 5 approval steps can be added. The step can be renamed to reflect the appropriate approval roles, for example, 'Approval by Local Manager'. The approver is determined based on various conditions using a business rule and the step level attributes. The approvers are automatically notified via mail about the approval task. After approval or rejection, the corresponding user status maintained against each approval step is updated in SAP S/4HANA.
Retire the asset	1..1	This step has activities for deactivation of various objects like open work orders, open notifications etc. This step should always be the last step of the variant. Post the final level of approval, using integration flow the open work orders, open notifications, maintenance plans, equipment's, are deactivated/closed and then finally asset is retired. In this step the notification user status is changed to Approved and then to completed. Post this, the asset retirement notification initially will be closed. In case of any errors, the requestor will be notified by an email and also a task will be created in My Inbox application to take corrective measures

Table 2. Process Attributes

Process Attributes	Detailed Description
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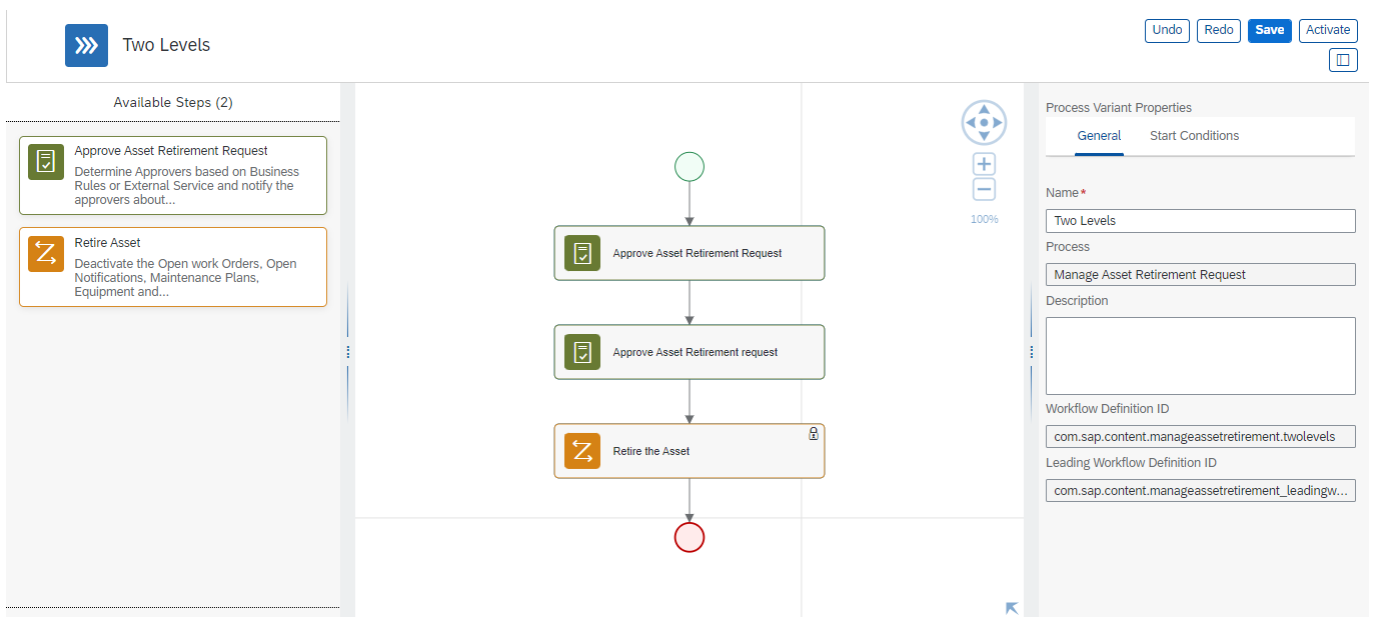
Approver Role	The role of the persona whose approval is required (This value will be used in the business rule to determine approvers)
User Status	Notification User status values that have been configured in S/4. The value maintained in each approval step will be picked up to change the notification user status after the approval

## Process Variants

A process variant consists of multiple process steps configured by a line of business expert. It is possible to create multiple variants of the same process. For example, if the Asset Net Book value is more than 5000 USD then there could be a multi-level approval process, or if the Asset Net Book value is less than 5000 USD, one-level approval is sufficient etc. Please refer [help documentation](#) about how to import content packages and configure a process variant.

### Asset Retirement Process

An example of a variant for Asset Retirement Process is shown below.



### Import Manage Asset Retirement and Configure Process Variants with SAP Build Process Automation

1. In the [SAP Build Process Automation Store](#), search for live process package Manage Asset Retirement and import the same. This content package has one process template and process variant(s) for that template.
2. In the Application Development [Lobby](#), click to open the package with name Manage Asset Retirement. This opens the package in a new tab/window.
3. Click the + icon next to the process template to create a new process variant.

4. Enter Name of the new Process Variant (ex, Two Step Approval).
5. Click the newly created Process Variant tile to save and activate the process variant.
6. The process variant has a default implementation with two steps and at least one level of approval.
7. It is possible to remove steps like “Approval for Manage Asset Retirement” from a process variant only if there are multiple approvals. Please note that whether a step is mandatory or optional, and how many a times any step can be used within a variant, are dependent on the constraints defined on the process steps.
8. Save and activate the variant. A successful activation will create a new workflow definition in the account that can be viewed in the [Monitor Processes and Workflows app](#).

### Import Manage Asset Retirement and Configure Process Variants with SAP Workflow Management

- Import content package **Manage Asset Retirement**. Please refer the standard [help document](#) about how to import a content package.
- Open content package in Flexibility Cockpit and click Process Variants tile.
- Click New Process Variant.
- Enter Name of the new Process Variant (ex, Low Asset Net Book Value Request) and select the process “Manage Asset Retirement Request”
- Click Create button.
- Select the newly created Process Variant tile to save and activate the process variant.
- The process variant has a default implementation with two approval steps
- It is possible to add up to 5 approval steps to a process variant. Drag and drop these steps where applicable but before the Retire Asset step.
- Process expert can influence whom this approval step will be assigned to by configuring the step level attribute - Approval Role and also the corresponding user status for each approval role needs to be maintained. This Approval Role value is used in Decisions.
- Save and activate the variant.
- A successful activation will create a new workflow definition in the account that can be viewed in the **Monitor Workflows – Workflow Definitions** app in SAP Fiori Launchpad.

### Sample Input Payload to the Workflow

```
{
  "assetdetails": {
    "AssetValue": "0.00",
    "Companycode": "9001",
    "EQUIPMENTNUM": "10007897",
    "NotifNum": "10005510",
    "Equipdesc": "Steam Generator 96",
```

```
"Plant": "1000",
"AssetNumber": "300040",
"currency": "USD",
"MaintenancePlans": [
  "415", "416", "418"],
"Notifications": [
  "500002647",
  "500002648",
  "500002649
],
"orders": [
  {
    "orderid": "4004086",
    "status": "CRTD MANC NMAT PRC"
  },
  {
    "orderid": "4004087",
    "status": "CRTD MANC NMAT PRC"
  },
],
"requestorEmailId": "xyz@email.com",
"MainWorkCenter": "CREW",
"CostCenter": "CC00000001",
"WBSElement": "EAM_CAPITAL0111",
"NotificationDescription": "visibility"
}
```



## Decisions & Policies

Decisions allow to encapsulate the business logic from core applications and supports the reuse of business rules across different business processes. Decisions enable customers to adopt changes in processes without changing the underlying workflows or application logic. SAP Build Process Automation or SAP Workflow Management has business rules capabilities that enables customers to centrally manage all decisions. Please go through the [business rules capabilities](#) in SAP Build Process Automation or SAP Workflow Management.

The workflow content package **Manage Asset Retirement** enable customers to flexibly configure decisions to gain flexibility to

1. Determine Approver Determination Strategy
2. Determine Approvers
3. Determine Process Admin

Please go through [Manage Decisions](#) application in SAP Build Process Automation or SAP Workflow Management

### Determine Approver Strategy

With this decision, it is possible to determine which approach will be taken to determine the approvers.

Approvers can be determined using a business rule or any other external service. For example, if the Company Code is 9001, approver can be configured to be determined by 'External Service' and for other Company Codes, approver can be configured to be determined by a Business Rules.

**Rule Service Name:** Determine Approver Determination Strategy

**Input:** Asset Details (Structure data type)

ATTRIBUTE	TYPE	DESCRIPTION
Asset Value	Number	Asset Net Book Value
Company Code	String	Company Code to which the Equipment is linked
Approver Role	String	Approver role that is maintained as a step attribute in the variant
Equipment Number	String	The equipment based on which the Asset retirement notification will be created
Notification Number	String	Notification created in the SAP S/4HANA system
Asset ID	String	The Asset that will be retired during the process
Plant	String	
Currency	String	The currency that applies to the Asset net book value
Cost Center	String	
WBS Element	String	

**Output: Approver Determination Strategy (Structure Data Type)**

ATTRIBUTE	TYPE	DESCRIPTION
Determination Strategy	String	Determination strategy can either “Business Rule” or “External Service” depending on Asset net book value

**Where used**

Step: Approve Asset Retirement Request

Determine Approvers

This decision is used in the Approval process step to determine the potential approver(s) based on different Asset Details attributes.

**Rule Service Name: Determine Approvers**

**Input: Asset Details (Structure data type)**

ATTRIBUTE	TYPE	DESCRIPTION
Asset Value	Number	Asset Net Book Value
Company Code	String	Company Code to which the Equipment is linked
Approver Role	String	Approver role that is maintained as a step attribute in the variant
Equipment Number	String	The equipment based on which the Asset retirement notification will be created
Notification Number	String	Notification created in the SAP S/4HANA system
Asset ID	String	The Asset that will be retired during the process
Plant	String	
Currency	String	The currency that applies to the Asset net book value
Cost Center	String	
WBS Element	String	

**Output: List of Approvers (Structure Data Type)**

ATTRIBUTE	TYPE	DESCRIPTION
Approver User ID	String	User ID of Approver
Approver Email ID	String	Email ID of Approver
User Group	String	The user group who can approve

		the step-in workflow
Unit of Time	String	Unit of time of due duration
Task Due Duration	String	The task due duration target by which the user task needs to be completed
Due Duration Reference Event	String	Reference to an event in the workflow to determine the target of the user task

### Rulesets

To determine approvers two Rulesets are working sequentially. Rulesets are given below.

1. Due Date Determination Policy: Policy to determine the due date for each approval step of Manage Asset Retirement.

Rule Definition: Determine Task Due Date

2. Approver Determination Policy - Determine approver for each approval step in the process based on the conditions like company code, Asset value, Asset, Currency, Plant, WBS Element.

Rule Definition: Determine Approvers

### Where used

Step: Approve Asset Retirement Request

#### Determine Process Admin

This decision is used in the approval process in order to trigger an admin flow, if in case no approvers are determined from the **Determine Approvers** decision. The process admin details returned from this decision will be notified to maintain approvers.

**Rule Service Name:** Determine Process Admin

**Input:** Asset Details (Structure data type)

ATTRIBUTE	TYPE	DESCRIPTION
Asset Value	Number	Asset Net Book Value
Company Code	String	Company Code to which the Equipment is linked
Approver Role	String	Approver role that is maintained as a step attribute in the variant
Equipment Number	String	The equipment based on which the Asset retirement notification will be created
Notification Number	String	Notification created in the SAP S/4HANA system

Asset ID	String	The Asset that will be retired during the process
Plant	String	
Currency	String	The currency that applies to the Asset net book value
Cost Center	String	
WBS Element	String	

**Output:** Process Administrator Details (Structure Data Type)

ATTRIBUTE	TYPE	DESCRIPTION
Admin Users	String	User ID of the process admin to whom Ui task will be sent
Admin Email	String	Email Id of the process Admin
Admin Group	String	Process admin group

**Ruleset**

1. Determine Process Administrator Policy: Policy to determine the process admin details, if in case no approvers are determined

**Where used**

Step: Approve Asset Retirement Request

## Determine Approvers from External Service

The process content provides an option to determine approvers using an alternative strategy, i.e. External Service instead of Business Rule.

To leverage this flexibility, the Approve Process step has a provision to call an integration flow with the following configuration. This integration flow needs to be implemented as per your business requirement.

API Attributes	Values

Destination	CPI [Refer to Setup Guide]
Path	/http/wfm/detAssetRetirementApprovers
HTTP Method	POST
CPI ADAPTER	HTTP
Payload sent by workflow (sample data)	<pre>{   "RuleServiceId": "e64a300581c444aeae270e725907f39",   "RuleServiceRevision": "2202",   "Vocabulary": [ { "AssetDetails": {     "CompanyCode": &lt;company code&gt;,     "FixedAssetValue": &lt;Asset netbook value&gt;,     "ApproverRole": &lt;Approver role maintained in the step attribute&gt;,     "EquipmentNumber": &lt;equipment number&gt;,     "NotificationNumber": &lt;notification number created in the Ui app&gt;,     "AssetID": &lt;Master fixed asset value&gt;,     "Plant": &lt;plant&gt;,     "Currency": &lt;Currency related to asset net book value&gt;,     "CostCenter": &lt;cost center&gt;,     "WBSElement": &lt;wbs element&gt;   } } ] };</pre>
Response Payload from integration flow	<p><b>RESPONSE STATUS, Ex 200 OK</b></p> <pre>{ "Result": [ { "Approvers": { "ApproverEmailID": &lt;comma separated email id's&gt;, "ApproverUserID": &lt;comma separated user id's&gt;, "UserGroup" : &lt;comma separated user group Id's&gt;, "DueDuration": &lt;Duration units&gt;, "UnitOfTime": &lt;"h" OR "m" OR "Y" OR "M" OR "D" &gt;, "DueDurationReference": &lt;"Task" OR "Workflow" &gt; } } ] }</pre>

	Note: When Status is not 200, then it is considered a failed service call.
Payload Type	Application / JSON

## Process Visibility

Process Visibility capability in SAP Build Process Automation or SAP Workflow Management enables Process Owners and Process Operators to gain real time visibility on processes and key process performance indicators. It also enables customers gain out of the box process visibility into their deployed processes. Please refer [help documentation](#) for more details.

**Manage Asset Retirement** process content package provide out of the box visibility on all the process variants in SAP Build Process Automation or SAP Workflow Management. Line of business expert will be able to enhance the visibility scenario to their requirements.

### Configure Visibility Scenarios in SAP Build Process Automation

1. Go to the Application Development Lobby.
2. Select Manage Asset Retirement Project.
3. Click to open **Manage Asset Retirement** scenario.
4. Click Activate button.

Please go through the [help documentation](#) on how to configure the visibility scenario.

### Configure Visibility Scenarios in SAP Workflow Management

1. Go to Process Flexibility Cockpit.
2. Select **Manage Asset Retirement** tile.
3. Click Visibility Scenarios and select Insights to **Manage Asset Retirement**.
4. You can modify the scenario to cater to your business requirement.

### Access Process Workspace in SAP Build Process Automation

1. The process visibility scenario can be accessed using SAP Launchpad Service. Refer to the help document for [creating UI applications on central SAP Fiori Launchpad](#) for SAP Build Process Automation.
2. Once you have added the applications process Visibility Scenario Instances (with app ID com.sap.spa.pv.instances) and Visibility Scenario Dashboard (with app ID com.sap.spa.pv.ovp), follow the below steps to add a tile to access the Manage Asset Retirement dashboard.
  - a. Navigate into “Visibility Scenario Dashboard”.
  - b. On the screen that opens, choose Create a Local Copy.
  - c. To use custom texts, choose Edit and adapt the texts in the General section.
  - d. You can use a custom title, description, and subtitle for the tile.
  - e. Choose the Navigation tab.
  - f. Under the Intent section, ensure that the value in the Action tab is unique for every application.
  - g. Under the Parameters section, provide the following:

Parameter Name	Parameter Value
Name	scenariold

Default Value	com.sap.content.assetretire.Insights_to_Manage_Asset_Retirement
Required	Toggle to Yes

- h. Choose Save.
- i. Assign the local copy to a group and make sure that they're visible to users. For more information, see [Assign Apps to a Group and to a Catalog](#) and [Assign Content to a Role](#).

- 3. Once created, select app that corresponds to "Manage Asset Retirement".
- 4. User will see the process visibility dashboard.

#### Access Process Workspace in SAP Workflow Management

- 1. Go to Process Flexibility Cockpit
- 2. Select Manage Asset Retirement
- 3. Click Live Process Insights Manage Asset Retirement
- 4. User will see the process visibility dashboard.

Please go through [help documentation](#) on how to access process workspace.