

SAP BUSINESS TECHNOLOGY PLATFORM | EXTERNAL

# Configuration Guide

## Manage Sales Order Approvals using SAP Build Process Automation or SAP Workflow Management

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# Overview

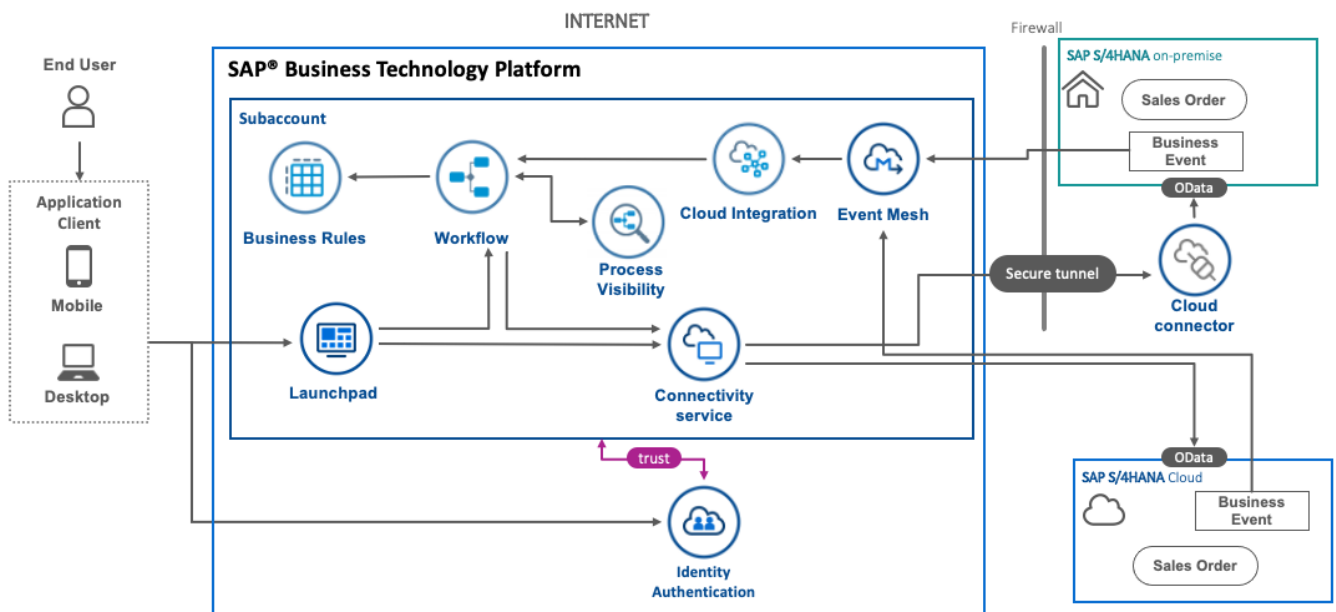
This document provides information about how to configure the Manage Sales Order approval process. Business Process Experts and Process Operators are the target users of this document.

Manage Sales Order process content package for S/4HANA enables to automate sales order approvals in a flexible and transparent way. It provides flexibility in executing a specific variant of the process depending on attributes like Total Net Amount etc. When a user submits a request to create a Sales Order in SAP S/4HANA, a pre-configured process variant is triggered in SAP Build Process Automation or SAP Workflow Management based on business conditions configured by process expert. On approval, Sales order status is updated in SAP S/4HANA system.

Salient features of this content package are mentioned below:

- Plug and Play with SAP S/4HANA without any additional development
- Automatic email notification to parties involved
- Business Rules provides flexibility in determining approvers strategy and approvers
- Custom validation on sales order attributes using Business Rules.
- 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

## SAP S/4HANA – Manage Sales Order Approvals



# Live Process Artifacts

A process 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 Sales Order package contains the following process template:

**Approve Sales Order** – Establish an approval process for a Sales Order created in SAP S/4HANA. It includes three 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, notifications activities, and handle the approval result. Table 1 represents the list of process steps available to be used in manage sales order process.

*Table 1. Process Steps.*

Process Steps/Subflows	Cardinality	Detailed Description
Validate Sales Order	0..1	This step/subflow has activities to validate a Sales order based on a business rule. It is possible to add custom rule-based validations on the Sales Order (such as basing it on Sales Organization, Distribution Channel, Division, Total NetAmount, Transaction Currency etc.). The step can occur maximum once in and must be the first step of the process. If the validation does not pass, the Sales Order is automatically rejected.
Approve Sales Order	0.. N	This step/subflow has activities to initiate and complete one level of approval for a <b>Sales Order that requires external approval</b> . Based on the number of approval levels required, this step can be configured and re-used multiple times. The step can be renamed to reflect the appropriate approval roles, for example, <b>'Approval by Local Manager'</b> . 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.
Update Sales Order	1..1	This step/subflow either <b>Rejects</b> or <b>Releases</b> the Sales Order based on the approvals and validations performed on it. This is the final step and the changes are reflected in S/4HANA.

The process has attributes and these attributes are available in process visibility to search approval process instances and to define process performance indicators. Please see Table 2 for more details

Table 2. Process Attributes.

Process Attributes	Detailed Description
Approval Level	The role of the persona whose approval is required

## 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 total net amount of Sales Order is more than 5000 USD then there could be a multi-level approval process, or if the total net amount 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.

### Sales Order Approval Process

An example of a Manage Sales Order Approval Process Variant is given below.



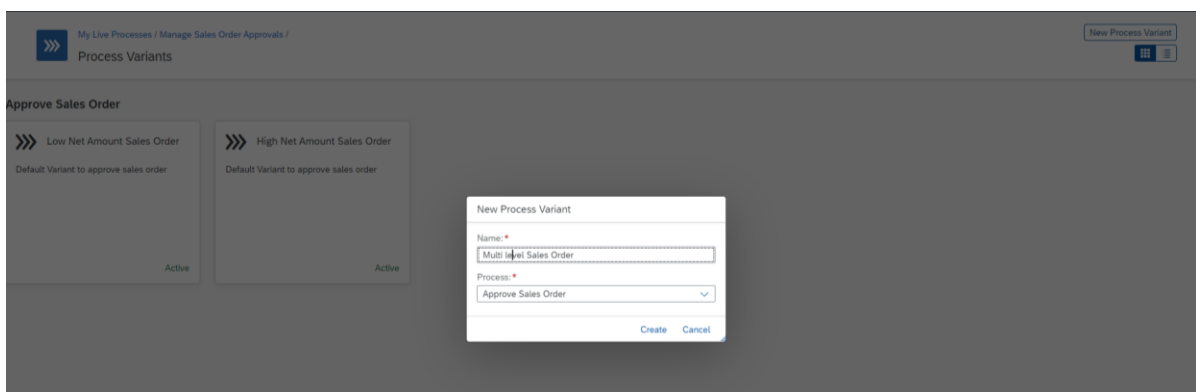
### Import Manage Sales Order Approval Process and Configure Process Variants with SAP Build Process Automation

1. In the [SAP Build Process Automation Store](#), search for live process package Manage Sales Order Approval Process 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 Sales Order Approval Process. 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 Sales Order Approval Process” 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 Sales Order Approvals Content and Configure Process Variants with SAP Workflow Management

1. Import content package **Manage Sales Order**. Please refer the standard help document about [how to import a content package](#).
2. Open content package in Flexibility Cockpit and click Process Variants tile.
3. Click New Process Variant.
4. Enter Name of the new Process Variant (ex, Low Net Amount Sales Order) and select “Approve Sales Order” as Process.
5. Click Create button.
6. Select the newly created Process Variant tile to save and activate the process variant.



7. The process variant has a default implementation with three steps to approve a sales order
8. It is possible to add step like “Approve Sales Orders” multiple times to a process variant. Drag and drop these steps where applicable.
9. Process expert can influence whom this approval step will be assigned to by configuring the step level attribute - Approval Level. This value is used in Decisions
10. 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.

## 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 decision management capabilities that enables customers to centrally manage all decisions. Please go through the [Decision Management capabilities](#) in SAP Build Process Automation or SAP Workflow Management.

Manage Sales Order Approval Process, enable customers to configure decisions to gain flexibility to

1. Perform (additional) Business Validation on Manage Sales Order.
2. Determine Approver Strategy
3. Determine Approver

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

### Sales Order Validation

With this decision, it is possible to add any business-specific validation on a Sales order. For example, you can enable/disable the cloud application for a specific Sales Organization.

Rule Service Name: Sales Order Validation

Input: Sales Order (Structure data type)

ATTRIBUTE	TYPE	DESCRIPTION
Transaction Currency	String	The currency that applies to the sales document
Sales Group	String	A group of sales people who are responsible for processing sales of certain products or services
Sales Office	String	A physical location (for example, a branch office) that has responsibility for the sale of certain products or services within a given geographical area
Sales District	String	
Overall SD Process Status	String	The processing status of the entire sales document
Sales Organization	String	An organizational unit responsible for the sale of certain products or services.
Distribution Channel	String	Organizational channel through which goods or services reach customers, for example, wholesale, retail, and direct sales
Organization Division	String	A way of grouping materials, products, or services. The system uses divisions to determine the sales areas and the business areas for a material, product, or service
Total Net Amount	Number	The net value of the sales document in document currency

Sold To Party	String	The customer who orders the goods or services. The sold-to party is contractually responsible for sales orders
Approval Step	String	Approval Step
Sales Order	String	The number that uniquely identifies the sales document
Sales Order Type	String	The sales and distribution document category (sales order, for example)
Sales Document Type	String	Classifies types of sales document that require different processing by the system.

Output: Validation Status (Structure)

Validate Purchase Info Record attributes with various attributes.

ATTRIBUTE	TYPE	DESCRIPTION
Status	String	'Passed' if validation is successful and 'Failed' if validation failed.
Reason	String	Explanation of validation status

Rule Definition

It is possible to maintain additional business validation using this rule to Validate Sales Order attributes.

Where used

Step: Validate Sales Order

### Approver Determination Strategy

This decision is used in the Approval process step to determine the Approver strategy based on different attributes of Sales Order. Based on the business requirement approver can be determined by external service or business rules. Say, if the Sales Organization is 1730, approver will be determined by 'External Service' and for other Sales Organizations, approver will be determined by Business Rules.

Input and output

Rule Service Name: Approver Determination Strategy

Input: Sales Order (Structure data type)

ATTRIBUTE	TYPE	DESCRIPTION
Transaction Currency	String	The currency that applies to the sales document
Sales Group	String	A group of sales people who are responsible for processing sales of certain products or services
Sales Office	String	A physical location (for example, a branch office) that has responsibility for the sale of certain products or services within a given geographical area



Sales District	String	
Overall SD Process Status	String	The processing status of the entire sales document
Sales Organization	String	An organizational unit responsible for the sale of certain products or services.
Distribution Channel	String	Organizational channel through which goods or services reach customers, for example, wholesale, retail, and direct sales
Organization Division	String	A way of grouping materials, products, or services. The system uses divisions to determine the sales areas and the business areas for a material, product, or service
Total Net Amount	Number	The net value of the sales document in document currency
Sold To Party	String	The customer who orders the goods or services. The sold-to party is contractually responsible for sales orders
Approval Step	String	Approval Step
Sales Order	String	The number that uniquely identifies the sales document
Sales Order Type	String	The sales and distribution document category (sales order, for example)
Sales Document Type	String	Classifies types of sales document that require different processing by the system.

#### Output Approver Determination Strategy (Structure)

ATTRIBUTE	TYPE	DESCRIPTION
Determination Strategy	String	Determination strategy can either "Business Rule" or "External Service" depending on Sales order details.

**Important Note:** Refer to appendix to understand how to configure and implement approver determination based on 'External Service'.

#### Determine Approver

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

#### Input and output

Rule Service Name: Determine Approver

Input: Sales Order (Structure data type)

ATTRIBUTE	TYPE	DESCRIPTION
Transaction Currency	String	The currency that applies to the sales document

Sales Group	String	A group of sales people who are responsible for processing sales of certain products or services
Sales Office	String	A physical location (for example, a branch office) that has responsibility for the sale of certain products or services within a given geographical area
Sales District	String	
Overall SD Process Status	String	The processing status of the entire sales document
Sales Organization	String	An organizational unit responsible for the sale of certain products or services.
Distribution Channel	String	Organizational channel through which goods or services reach customers, for example, wholesale, retail, and direct sales
Organization Division	String	A way of grouping materials, products, or services. The system uses divisions to determine the sales areas and the business areas for a material, product, or service
Total Net Amount	Number	The net value of the sales document in document currency
Sold To Party	String	The customer who orders the goods or services. The sold-to party is contractually responsible for sales orders
Approval Step	String	Approval Step
Sales Order	String	The number that uniquely identifies the sales document
Sales Order Type	String	The sales and distribution document category (sales order, for example)
Sales Document Type	String	Classifies types of sales document that require different processing by the system.

#### Output: Approver Details

ATTRIBUTE	TYPE	DESCRIPTION
User Id	String	User ID (comma separated list) of the individual approvers
Unit Of Time	String	Unit of time of due duration
Due Duration	Number	The task due duration target by when the Approval (user task) needs to be completed

<b>Due Duration Reference</b>	String	This is either 'Task' or 'Workflow'. The duration will be calculated based on the start time of either the entire process (Workflow), or the current Approval Task (Task)
<b>Email</b>	String	Email address of the approver or approvers
<b>User Group</b>	String	The user group who can approve the step in the process

#### 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 Sales Order.  
Rule Definition: Determine Task Due Date
2. **Approver Determination Policy:** Determine approver for each approval step in the process based on the conditions like sales organization, sales order type, total net amount of order, transaction Currency, sold to party.  
Rule Definition: Determine Approver

#### Where used

Step: Approve Credit Check

## Process Visibility

SAP Process Visibility capability of 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 Sales Order

**Manage Sales Order Approvals** process content package provides out of the box visibility on all the process variants in SAP Build Process Automation or SAP Workflow Management. Sales expert or line of business expert will be able to enhance the visibility scenario.

### Configure Visibility Scenarios in SAP Build Process Automation

1. Go to the Application Development Lobby.
2. Select Manage Sales Order Approval Process Project.
3. Click to open **Manage Sales Order Approval Process** 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 Visibility Cockpit.
2. Select Manage Sales Order Approval Process tile.
3. Click Visibility Scenarios tile.
4. Select **Manage Sales Order Approval Process** scenario and click Activate.

You can modify the business scenario and activate it. Refer to the end user guide to learn more about using the Visibility Dashboard.

Please go through [help documentation](#) to learn more on how to model a visibility scenario.

### 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 Sales Order Approval Process 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	scenarioid
Default Value	com.sap.content.s4soapprovals
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 Sales Order Approval Process”.
  4. User will see the process visibility dashboard below.

## Access Process Workspace in SAP Workflow Management

1. Go to Process Flexibility Cockpit
2. Select Manage Sales Order Approval Process
3. Click Live Process Insights Manage Sales Order Approval Process
4. User will see the process visibility dashboard below.

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

# Appendix

## Approver Determination Strategy – 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 strategy, the Approve Process step has a provision to call an iFlow with the following configuration. This iFlow needs to be implemented as per your business requirement.

Destination	CPI [Refer to Setup Guide]
CPI Adapter	HTTP
Endpoint	/comsapcontentdetermineSalesOrderApprover
HTTP Method	POST
Request Payload Type	Application/json
Request Payload Structure	<pre>{   "Vocabulary": [     {       "SalesOrder": &lt;Sales Order Details&gt;     }   ] }</pre>
Response Payload Structure	<pre>{   "Result": [     {       "Approver": {         "DueDurationReference": &lt; "Task" OR "Workflow" &gt;,         "Email": &lt;comma separated email ids&gt;,         "UnitOfTime": &lt; "h" OR "m" OR "Y" OR "M" OR "D" &gt;,         "UserId": &lt;comma separated User Ids&gt;,         "DueDuration": &lt;Duration units (integer/number)&gt;,         "UserGroup" :&lt;comma separated user-group ids&gt;       }     }   ] }</pre>

The screenshot displays the SAP Business Process Manager interface. On the left, a process diagram shows a task named "Determine Approvers from External Service" highlighted with a green border. Below it, a "Business Rules" task is labeled "Prepare Rules Payload for Approvers List". On the right, the "Service Task Properties" panel is open, showing the following configuration:

Property	Value
Destination	CPI
Choose a Service from	Others
Path	/comsapcontentdetermineSalesOrderApprover
HTTP Method	POST
Path to XSRF Token	
Request Variable	<code>\${context.approverRulesPayload}</code>
Response Variable	<code>\${context.approvers}</code>
Principal Propagation	<input type="checkbox"/>