

SAP BUSINESS TECHNOLOGY PLATFORM | EXTERNAL

Configuration Guide

Plant Maintenance Order Date Change Notification using SAP Build Process Automation or SAP Workflow Management

Table of Contents

Table of Contents	2
Overview	3
Artifacts	4
Process	4
Process Variants.....	6
Import Plant Maintenance Order Date Change Notification and Configure Process Variants with SAP Build Process Automation.....	7
Import Plant Maintenance Order Date Change Notification Content and Configure Process Variants with SAP Workflow Management	7
AutomaticActions.....	8
ManualActions	8
ExecuteAction	8
Decisions & Policies	9
DetermineMaintenancePlanner.....	9
DetermineAppropriateAction	10
DetermineProcessVariant	11
DetermineUserIDFromEmail	13
Process Visibility	14
Configure Visibility Scenarios in SAP Build Process Automation.....	14
Configure Visibility Scenarios in SAP Workflow Management	14
Access Process Workspace in SAP Build Process Automation.....	14
Access Process Workspace in SAP Workflow Management.....	15

Overview

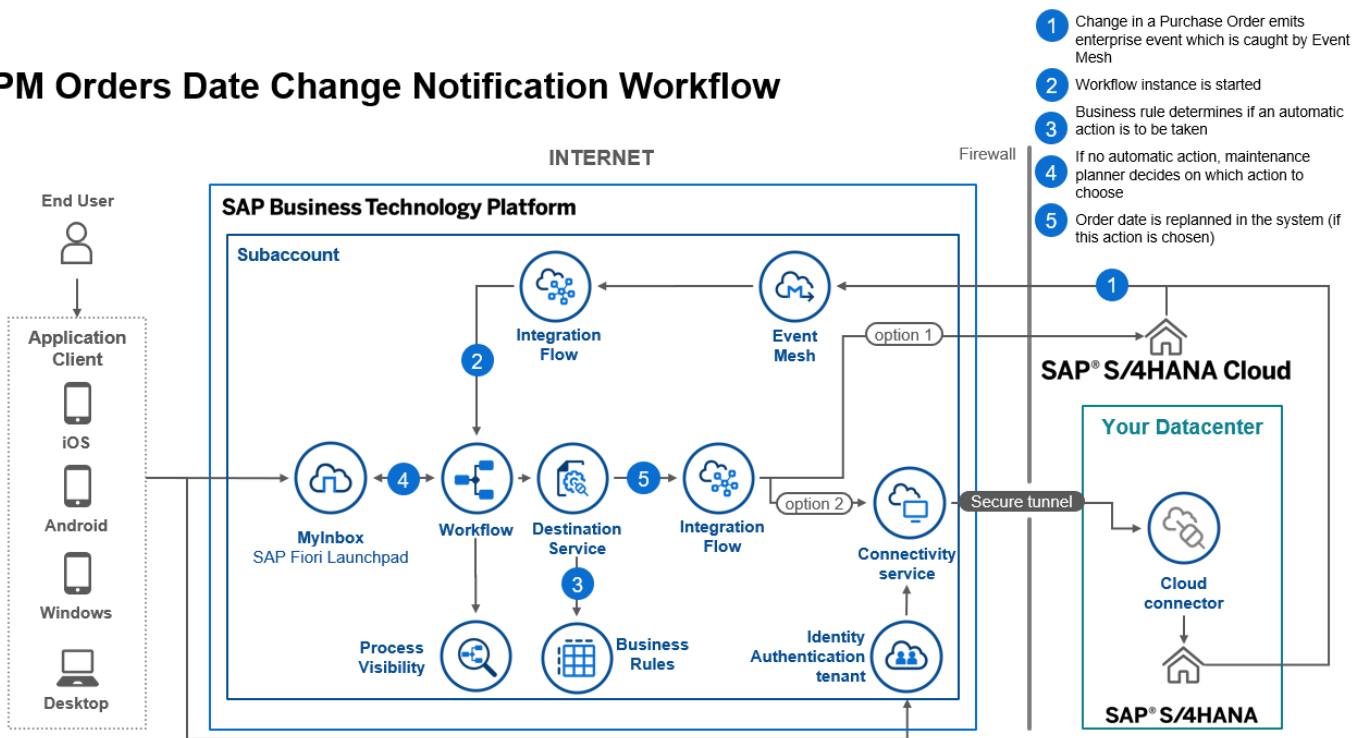
This document provides information about configuration steps to consume the package **Plant Maintenance Order Date Change Notification**. The main audience of this document are Plant Maintenance Planners, Procurement Leads, Developers and Product Owners.

This scenario enables maintenance planners to react to delays in the delivery of components required for plant maintenance orders. When an update to a purchase order or an associated document occurs, the workflow checks if there is a scheduling conflict (e.g., delivery date of vendor confirmation for a component is later than the start date of the maintenance order). In case of a conflict the maintenance planner is informed and can decide between the following actions: They can replan the maintenance order to a later date, can request a supplier change by a procurement responsible or can choose to just accept the delay.

This package includes the following features:

- React to changes to the Purchase Order with event-based integration with Event Mesh
- Automatic determination of procurement responsible based on Responsibility Management
- Automatic replanning of the maintenance order based on the availability date of the parts taking into account the material goods receipt duration

PM Orders Date Change Notification Workflow



Artifacts

A package consists of process templates, process steps, 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 **Plant Maintenance Order Date Change Notification** package contains the following process template:

PMOrdersDateChangeNotification

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 activity to determine the approvers, approval task, notifications, and handle the approval result. Table 1 represents the list of process steps/sub flows available to be used in **Plant Maintenance Order Date Change Notification**.

Table 1. Process Steps

Process Steps	Cardinality	Detailed Description
AutomaticActions	1..1	Determine if an automatic action can be taken and if so, which action should be taken. This step is mandatory
ManualActions	1..1	If no automatic action can be taken, it must be decided manually what to do in this case. This step therefore acts as a fallback to the optional AutomaticActions step. It will create a user task in the inbox of the maintenance planner where they can decide what to do.
ExecuteActions	1..1	This step will execute the actions determined by the previous steps. It either replans the order, creates a task in the inbox of the automatically determined purchase or will do nothing and accept the delay

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 3 for more details.

Table 3. Process Attributes.

Process Attributes	Detailed Description
AutomaticAction	Was an automated action taken?
DeterminedAction	Which action was determined? Replan/Accept/ChangeSupplier
MaintenanceOrder	ID of the maintenance order
TypeOfConflict	Type of conflict that was detected
AmountDiscrepancy	Discrepancy between the requested and the confirmed amount
DaysDelay	Discrepancy between the requested and the confirmed date
ResponsibleProcessor	Who was determined to make the decision?
Supplier	Which is the supplier causing the delay?

NewSupplier	Which is the supplier chosen to solve the delay?
OrderType	Type of the maintenance order

Sample Conditions to directly start a variant workflow

```
{  
  "PurchaseOrder": {  
    "PurchaseOrder": "<ID>"  
  }  
}
```

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, a variant could be configured that does not contain an AutomaticActions step to only allow manual processing.

Please refer [help documentation](#) about how to import content packages and configure a process variant.

The screenshot displays a software interface for configuring a process variant. At the top, the title bar reads "PM Order Date Change Notification Default" and includes buttons for "Undo", "Redo", "Save", and "Activate".

On the left side, there is a panel titled "Available Steps (3)" containing three step types:

- AutomaticActions**: Determine if an automatic action can be taken and if so, which action should be taken.
- ExecuteActions**: ExecuteActions
- ManualActions**: ManualActions

The central workspace shows a vertical flowchart with three steps connected by downward arrows:

- AutomaticActions** (top step)
- ManualActions** (middle step)
- ExecuteActions** (bottom step)

The flow starts with a green circle at the top and ends with a red circle at the bottom. To the right of the flowchart, there are zoom controls (a four-way arrow, plus, and minus icons) and a "100%" zoom level indicator.

On the far right, the "Process Variant Properties" panel is visible, containing the following fields:

- Name ***: PM Order Date Change Notification Default
- Process**: PMOrdersDateChangeNotification
- Description**: PmOrderDateChangeNtfDefault

Import Plant Maintenance Order Date Change Notification and Configure Process Variants with SAP Build Process Automation

1. In the [SAP Build Process Automation Store](#), search for live process package Plant Maintenance Order Date Change Notification 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 Plant Maintenance Order Date Change Notification. 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 Plant Maintenance Order Date Change Notification” 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 Plant Maintenance Order Date Change Notification Content and Configure Process Variants with SAP Workflow Management

1. In Process Flexibility Cockpit app, search for content package **PM Orders Date Change Notification**. and import the same. Please refer the standard help document about [how to import a content package](#). This content package has one process template and process variant(s) for that template are required.
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, default) and select “Plant Maintenance Order Date Change Notification ” as Process.
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.
7. It is possible to remove steps like “AutomaticActions” from a process variant. 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 Workflows – Workflow Definition app in SAP Fiori Launchpad.
9. Update the Determine Process Variant Policy and include the newly created workflow definition ID in the rule

AutomaticActions

Determines automatically with the help of a Business Rule if the action to take for this conflict should be taken automatically and if so, which action to choose

1. Place this step at the beginning of the variant. Place this step only once

ManualActions

Determines the responsible maintenance planner and enables them to decide on the action to take in a user task

1. Place this step after the AutomaticActions and before the mandatory ExecuteActions step. Place this step only once

ExecuteAction

Executes the determined actions. This can either be an automatic replanning of the order, an additional user task for the procurement responsible or the acceptance of the delay.

1. Place this step at the end. Place this step only once

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.

Plant Maintenance Order Date Change Notification enable customers to flexibly configure decisions to gain flexibility to

1. DetermineMaintenancePlanner
2. DetermineAppropriateAction
3. DetermineProcessVariant
4. DetermineUserIDFromEmail

DetermineMaintenancePlanner

Determine the maintenance planner to decide action

Rule Service Name: Determine maintenance planner

Input: Maintenance order data (Structure)

Contains all information of maintenance orders.

ATTRIBUTE	TYPE	DESCRIPTION
Functional location	String	Functional location
Equipment	String	Equipment
Maintenance planner group	String	Maintenance planner group
Maintenance planning plant	String	Maintenance planning plant
Maintenance order type	String	Maintenance order type
Maintenance plant	String	Maintenance plant
Operation person responsible	String	Operation person responsible
Material group	String	Material group
Work center	String	Work center
Work center plant	String	Work center plant
Order category	String	Order category
Order type	String	Order type
Plant	String	Plant

Output: Maintenance planner (Structure)

Contains all relevant attributes of a maintenance planner.

ATTRIBUTE	TYPE	DESCRIPTION
User ID	String	User ID that is unique identifier in the BTP
Group ID	String	A group ID where the user belongs to
Email	String	E-Mail address, to contact the user

Rule Definition

The rule service uses the rule DetermineMaintenancePlanner to determine the details of the planner such as email address, group ID, and user ID.

Where used

Step: Determine maintenance planner

DetermineAppropriateAction

Determine the action which will be executed during the maintenance order execution.

Rule Service Name: Determine appropriate action

Input: Maintenance order data (Structure)

Contains all information of maintenance orders.

ATTRIBUTE	TYPE	DESCRIPTION
Functional location	String	Functional location
Equipment	String	Equipment
Maintenance planner group	String	Maintenance planner group
Maintenance planning plant	String	Maintenance planning plant
Maintenance order type	String	Maintenance order type
Maintenance plant	String	Maintenance plant
Operation person responsible	String	Operation person responsible
Material group	String	Material group
Work center	String	Work center
Work center plant	String	Work center plant
Order category	String	Order category
Order type	String	Order type
Plant	String	Plant

Output: Action (Structure)

Contains all relevant attributes of a maintenance planner.

ATTRIBUTE	TYPE	DESCRIPTION
Chosen Automatic Action	String	Which action to execute? (REPLAN ACCEPT CHANGESUPPLIER)
Automatic Action Possible	String	Is an automatic action possible? (MANUAL AUTOMATIC)

Rule Definition

The rule service uses the rule DetermineAppropriateAction to determine the details of the planner such as email address, group ID, and user ID.

Where used

Step: AutomaticAction

DetermineProcessVariant

Determines the process variant to start based on maintenance order data

Rule Service Name: Determine process variant

Input: Maintenance order data (Structure)

Contains all information of maintenance orders.

ATTRIBUTE	TYPE	DESCRIPTION
Functional location	String	Functional location
Equipment	String	Equipment
Maintenance planner group	String	Maintenance planner group
Maintenance planning plant	String	Maintenance planning plant
Maintenance order type	String	Maintenance order type
Maintenance plant	String	Maintenance plant
Operation person responsible	String	Operation person responsible
Material group	String	Material group
Work center	String	Work center
Work center plant	String	Work center plant
Order category	String	Order category
Order type	String	Order type

Plant	String	Plant
-------	--------	-------

Output: Process Variant (Structure)

Contains all relevant attributes of a maintenance planner.

ATTRIBUTE	TYPE	DESCRIPTION
Variant Name	String	The name of the process variant
Process responsible admin	String	The responsible administrator
Escalation time	String	Escalation Time in Hours

Rule Definition

The rule service uses the rule DetermineProcessVariant to determine the details of the planner such as email address, group ID, and user ID.

Where used

Step: StartVariant

DetermineUserIDFromEmail

Determines which User ID belongs to a given email address. This is used to be able to assign the user task to the procurement responsible as no BTP User ID is returned from Responsibility API

Rule Service Name: Determine process variant

Input: EmailAddress (String)

Output: UserID (String)

Rule Definition

The rule service uses the rule DetermineUserIDFromEmail to determine the UserID

Where used

Step: StartVariant

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.

Plant Maintenance Order Date Change Notification 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 Plant Maintenance Order Date Change Notification Project.
3. Click to open **Plant Maintenance Order Date Change Notification** 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 **Plant Maintenance Order Date Change Notification** tile.
3. Click Visibility Scenarios tile.
4. Select Plant Maintenance Order Date Change Notification scenario

Please go through [help documentation](#) 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 Plant Maintenance Order Date Change Notification 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
----------------	-----------------

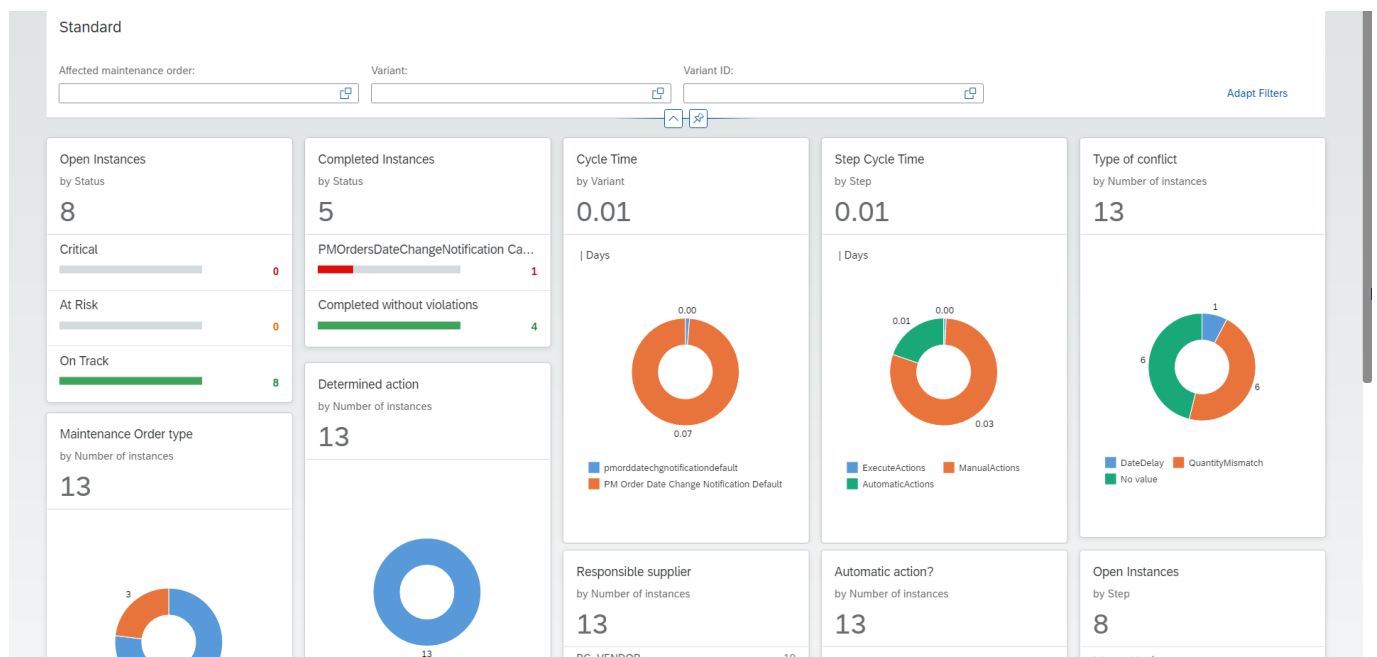
Name	scenariold
Default Value	com.sap.content.pmorddtchngntf
Required	Toggle to Yes

- 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 "Plant Maintenance Order Date Change Notification".
4. User will see the process visibility dashboard.

Access Process Workspace in SAP Workflow Management

1. Go to Process Flexibility Cockpit
2. Select **Plant Maintenance Order Date Change Notification**
3. Click Live Process Insights **Plant Maintenance Order Date Change Notification**
4. User will see the below detailed process visibility dashboard.



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