

SAP BUSINESS TECHNOLOGY PLATFORM | EXTERNAL

Configuration Guide

Notify Production of Maintenance Order using SAP Build Process Automation or SAP Workflow Management

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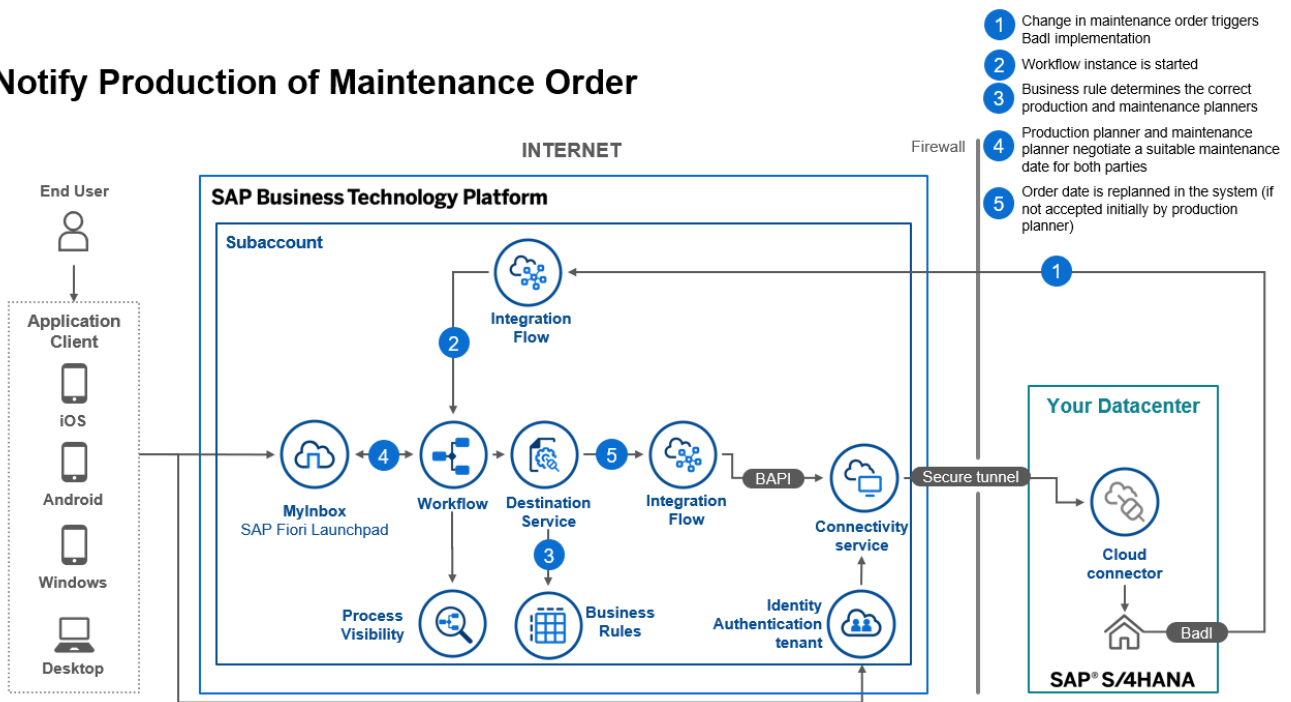
Overview

This document provides information about setting up the SAP Business Technology Platform account to consume the workflow content package **Notify Production of Maintenance Order**. The main audience of this document are technical IT/system administrators.

This workflow scenarios enables production planners and maintenance planners to negotiate a fitting maintenance date for an equipment or functional location and accordingly replan the start date of the related maintenance order in SAP S/4HANA

- Enable negotiation of maintenance dates between production planner and maintenance planner
- Automatically replan the maintenance order once a date has been negotiated

Notify Production of Maintenance Order



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 **Notify Production of Maintenance Order** package contains the following process template:

Notify Production Template – Contains the steps needed for the scenario

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 **Notify Production Template**.

Table 1. Process Steps

| Process Steps | Cardinality | Detailed Description |
|--------------------------|-----------------------|---|
| Review Maintenance Date | 1..1 = mandatory step | This step allows the maintenance planner and the production planner to negotiate a maintenance date that works for both of them. This step is mandatory and has to be the first step in the variant. |
| Update Maintenance Order | 0..1 = optional step | This step will automatically update the basic start date of the maintenance order according to the date that was negotiated in the Review Maintenance Date step. This step is optional and has to be placed after the Review Maintenance Date step. |

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 |
|--------------------|-----------------------------------|
| MaintenanceOrder | Maintenance Order ID |
| OrderType | Type of the maintenance order |
| Priority | Priority of the maintenance order |
| Plant | Plant of the maintenance order |
| MaintenancePlanner | Maintenance Planner Group |
| ProductionPlanner | Production Planner Group |
| Equipment | Equipment |
| FunctionalLocation | Functional Location |

Sample Conditions to directly start a variant workflow using Start Variant for Notify Production of Plant

Maintenance Order

```
{
  "context": {
    "order": {
      "ORDER_HEADER": {
        "MAINT_PLANNER_GROUP": "",
        "PLANT": "DE01",
        "PLANNER_GROUP": "",
        "PROD_PLANNER_GROUP": "01",
        "ORDER_TYPE": "20",
        "PRIORITY": "HIGH",
        "START_DATE": "20220110",
        "FUNCTIONAL_LOCATION": "",
        "SYSTEM_CONDITION": "",
        "MAINTENANCE_ORDER": "000004001046",
        "EQUIPMENT": "EQUI",
        "STATUS": [
          {
            "STAT": "I0004",
            "OBJNR": "NP000004001046",
            "TEXT": "FMAT"
          },
          {
            "STAT": "I0010",
            "OBJNR": "NP000004001046",
            "TEXT": "TRÜC"
          },
          {
            "STAT": "I0016",
            "OBJNR": "NP000004001046",
            "TEXT": "VOKL"
          },
          {
            "STAT": "I0042",
            "OBJNR": "NP000004001046",
            "TEXT": "TFRE"
          },
          {
            "STAT": "I0053",
            "OBJNR": "NP000004001046",
            "TEXT": "VKNT"
          },
          {
            "STAT": "I0215",
            "OBJNR": "NP000004001046",
            "TEXT": "SSAP"
          },
          {
            "STAT": "I0420",
            "OBJNR": "NP000004001046",
            "TEXT": "NMVP"
          },
          {
            "STAT": "E0001",
            "OBJNR": "NP000004001046",
            "TEXT": "PLEP"
          },
          {
            "STAT": "E0009",
            "OBJNR": "NP000004001046",
            "TEXT": "NOAP"
          }
        ],
        "ACTIVITY_TYPE": "",
        "DESCRIPTION": "PSS Standard DE01 (w/o configuration)",
        "CAPACITY_RESPONSIBLE": "",
        "FINISH_DATE": "20220304"
      },
      "OPERATION": [
        {
          "WORK_TIME": "",
          "OPERATION_NUMBER": "0010",
          "LATEST_START_DATE": "20220110",
          "ASSIGNED_WBS": "C-00148-1",
          "PRIORITY": "",
          "EARLIEST_FIN_DATE": "20220110",
          "PLANNED_WORK": "0.0 ",
          "OBJECT_ID": "00000000",
          "EARLIEST_START_DATE": "20220110",
          "DURATION": "1.0 ",
          "OPERATION_DESC": "Project Start",
        }
      ]
    }
  }
}
```

```

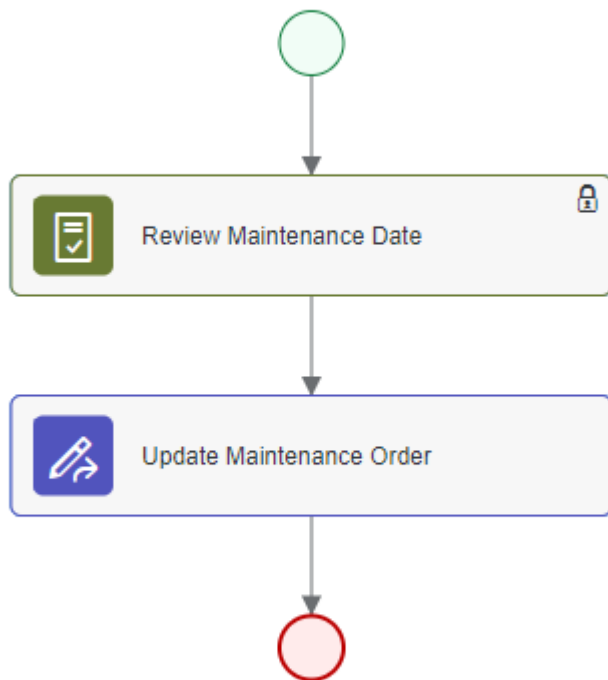
    "LATEST_FIN_DATE": "20220110",
    "WORK_CENTER": ""
  },
  {
    "WORK_TIME": "",
    "OPERATION_NUMBER": "0020",
    "LATEST_START_DATE": "20220304",
    "ASSIGNED_WBS": "C-00148-1",
    "PRIORITY": "",
    "EARLIEST_FIN_DATE": "20220110",
    "PLANNED_WORK": "0.0 ",
    "OBJECT_ID": "00000000",
    "EARLIEST_START_DATE": "20220110",
    "DURATION": "0.0 ",
    "OPERATION_DESC": "Project Documents",
    "LATEST_FIN_DATE": "20220304",
    "WORK_CENTER": ""
  },
  {
    "WORK_TIME": "",
    "OPERATION_NUMBER": "0090",
    "LATEST_START_DATE": "20220118",
    "ASSIGNED_WBS": "C-00148-1.01",
    "PRIORITY": "",
    "EARLIEST_FIN_DATE": "20220131",
    "PLANNED_WORK": "0.0 ",
    "OBJECT_ID": "00000000",
    "EARLIEST_START_DATE": "20220111",
    "DURATION": "15.0 ",
    "OPERATION_DESC": "Advance Procurement",
    "LATEST_FIN_DATE": "20220207",
    "WORK_CENTER": ""
  },
  {
    "WORK_TIME": "",
    "OPERATION_NUMBER": "1000",
    "LATEST_START_DATE": "20220303",
    "ASSIGNED_WBS": "C-00148-1.05",
    "PRIORITY": "",
    "EARLIEST_FIN_DATE": "20220304",
    "PLANNED_WORK": "0.0 ",
    "OBJECT_ID": "00000000",
    "EARLIEST_START_DATE": "20220303",
    "DURATION": "2.0 ",
    "OPERATION_DESC": "Acceptance of Contract",
    "LATEST_FIN_DATE": "20220304",
    "WORK_CENTER": ""
  }
],
"START_BY": "",
"START_DATE": "20220111",
"SCHEDULE_BOARD": "https://saps4x.cbs-consulting.de/sap/bc/ui2/flp?sap-client=200&sap-
language=DE#WorkCenterUtilization-displayGantt"
},
"ProcessControl": {
  "ApprovalHistory": [],
  "ResponsibleAdminMail": "jakob.ruf@cbs-consulting.de"
}
},
"definitionId": "notifyproductiontemplate.notifyproductiondefault"
}

```

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 you do not want to update the maintenance order automatically, this step can be omitted.

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



Import Notify Production of Maintenance Order and Configure Process Variants with SAP Build Process Automation

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

1. In Process Flexibility Cockpit app, search for content package Notify Production of Maintenance Order. 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 “Notify Production Template” 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 the Update Maintenance Order step 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

Review Maintenance Date

This step allows the maintenance planner and the production planner to negotiate a maintenance date that works for both of them.

1. This step is mandatory, has to be placed exactly once and has to be placed at the beginning of the variant. There are no special properties

Update Maintenance Order

This step will automatically update the basic start date of the maintenance order according to the date that was negotiated in the Review Maintenance Date step.

1. This step is optional, has to be placed at most once and has to be placed after the Review Maintenance Date step. There are no special properties

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.

Notify Production of Maintenance Order enable customers to flexibly configure decisions to gain flexibility to

1. Determine Process Variant
2. Determine Maintenance Planner
3. Determine Production Planner

Determine Process Variant

Determines Process Variant based on Maintenance Order details

Rule Service Name: Determine Process Variant Service

Input: Maintenance Order Definition (Structure data type)

| ATTRIBUTE | TYPE | DESCRIPTION |
|------------------|--------|-------------------|
| Equipment | String | Equipment |
| Work Duration | String | Work Duration (h) |
| Priority | String | Priority |
| PM Activity Type | String | PM Activity Type |

Output: Process Variant (Structure data type)

Contains data of the process variant like escalation time, process variant ID and process admin details

| ATTRIBUTE | TYPE | DESCRIPTION |
|----------------------|--------|---|
| Variant ID | String | Variant ID used to start the process variant |
| Escalation Time | Number | Escalation Time in hours |
| Process Admin UserID | String | Process Admin UserID used to solve process problems |
| Process Admin Mail | String | Process Admin Mail used to solve process problems |
| Process Admin Group | String | Process Admin Group used to solve process problems |

Rule Definition

DetermineProcessVariant

Where used

Step: Start Variant for Notify Production of Plant Maintenance Order

Determine Production Planner

Determines the User Information of the production planner based on the provided Capacity Planner Information

Rule Service Name: Determine Production Planner Service

Input: Capacity Planner (Structure data type)

| ATTRIBUTE | TYPE | DESCRIPTION |
|------------------|--------|--|
| Capacity Planner | String | Value of the Capacity Planner coming out of S/4HANA system |

Output: User Information (Structure data type)

Provides group id, user id, and email and is used to assign user tasks to users

| ATTRIBUTE | TYPE | DESCRIPTION |
|-----------|--------|--------------------------------|
| User ID | String | User ID of the BTP user |
| Group ID | String | Group ID of the BTP user group |
| EMail | String | Email address of the user |

Rule Definition

DetermineProductionPlanner

Where used

Step: Review Maintenance Date

Determine Maintenance Planner

Determines the User Information of the maintenance planner based on the provided Maintenance Planner Information

Rule Service Name: Determine Maintenance Planner Service

Input: Maintenance Planner Information (Structure data type)

| ATTRIBUTE | TYPE | DESCRIPTION |
|-----------|------|-------------|
|-----------|------|-------------|

| | | |
|------------------------|--------|---|
| Capacity Planner | String | Planner Group of the maintenance order |
| Planning Plant | String | Planning Plant of the maintenance order |
| Plant Section | String | Plant Section of the maintenance order |
| Technical Object | String | Technical Object affected by the maintenance order. This can either be the equipment of the functional location |
| PM Work Center | String | PM Work Center maintained in the maintenance order |
| Order Type | String | Order Type of the maintenance order |
| Production Work Center | String | Production Work Center of the maintenance order |

Output: User Information (Structure data type)

Provides group id, user id, and email and is used to assign user tasks to users

| ATTRIBUTE | TYPE | DESCRIPTION |
|-----------|--------|--------------------------------|
| User ID | String | User ID of the BTP user |
| Group ID | String | Group ID of the BTP user group |
| E-Mail | String | Email address of the user |

Rule Definition

DetermineMaintenancePlanner

Where used

Step: Review Maintenance Date

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.

Notify Production of Maintenance Order 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 Notify Production of Maintenance Order Project.
3. Click to open **Notify Production of Maintenance Order** 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 **Notify Production of Maintenance Order** tile.
3. Click Visibility Scenarios tile.
4. Select Notify Production of Maintenance Order 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 Notify Production of Maintenance Order 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:

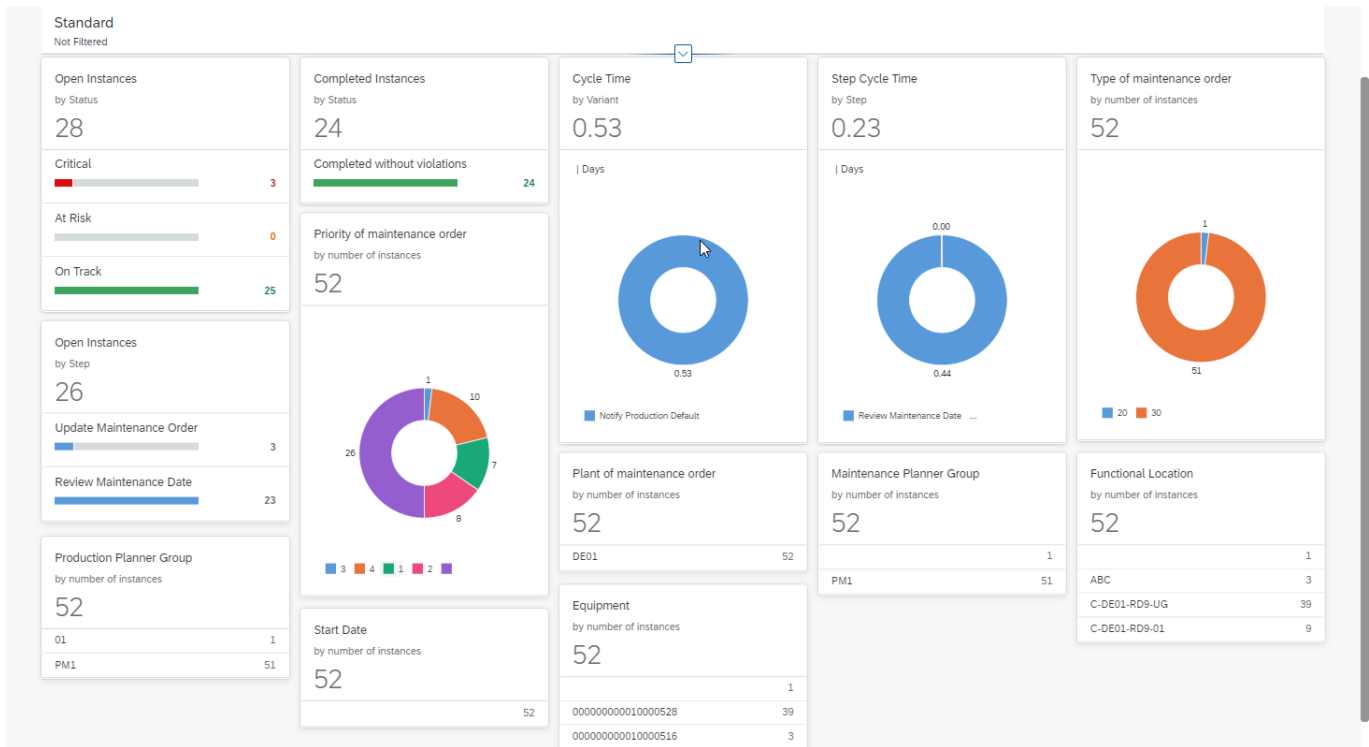
| Parameter Name | Parameter Value |
|----------------|----------------------------------|
| Name | scenariold |
| Default Value | com.sap.content.notifyproduction |
| Required | Toggle to Yes |

- 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 “Notify Production of Maintenance Order”.
 4. User will see the process visibility dashboard.

Access Process Workspace in SAP Workflow Management

1. Go to Process Flexibility Cockpit
2. Select **Notify Production of Maintenance Order**

3. Click Live Process Insights **Notify Production of Maintenance Order**
4. User will see the below detailed process visibility dashboard.



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