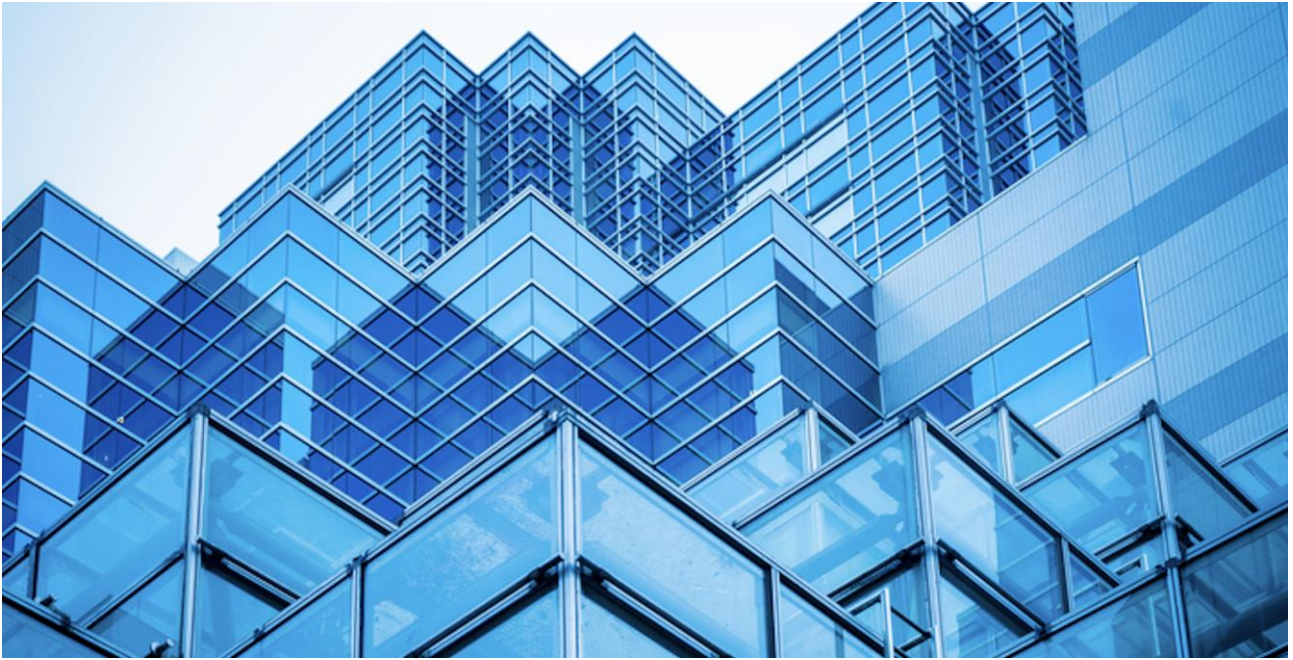




PUBLIC

SAP Build Process Automation

Notify Production of Maintenance Order Configuration and User Guide

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This document contains 3 sections. Each section covers different information about this template content package.

1. **Overview:** In this section, you will get quick overview of the use case, what are high-level components used and how the template works in nutshell. Prerequisite section provides information of different services of SAP Business Technology Platform that are required to use this template.
2. **Configuration Guide:** It contains sections which will guide you to setup your (a) SAP Business Technology Platform Account with destination, cloud connector, user roles etc., (b) Integration Content via SAP Integration Suite, (c) SAPUI5 application via SAP Business Application Studio and (d) Import and configure the template using SAP Build Process Automation design studio
3. **User Guide:** This section provides details about different artefacts that are used in this template like process definition, decision diagram, action project details, forms, email notifications etc. to better understand how different capabilities are used in this template.

Note:

- Learning contents are published only for demo and reference purposes. We do not provide any support to learning / sample content.
- This documentation is not a detailed guide to setup SAP Business Technology Platform services. It assumes that IT admin who is setting the content is skilled with SAP Business Technology Platform environment. **Configuration section must be followed.**
- This template content is to accelerate your solution development. You must modify this template according to your requirements to achieve the desired business goal. To use this template content, you need to have basic knowledge and understanding of SAP Build Process Automation, SAP Integration Suite, and its capabilities.

Overview

This document provides technical information about what needs to be configured to make the package – Notify Production of Maintenance Order run. The main audience of this document are technical IT/system administrators.

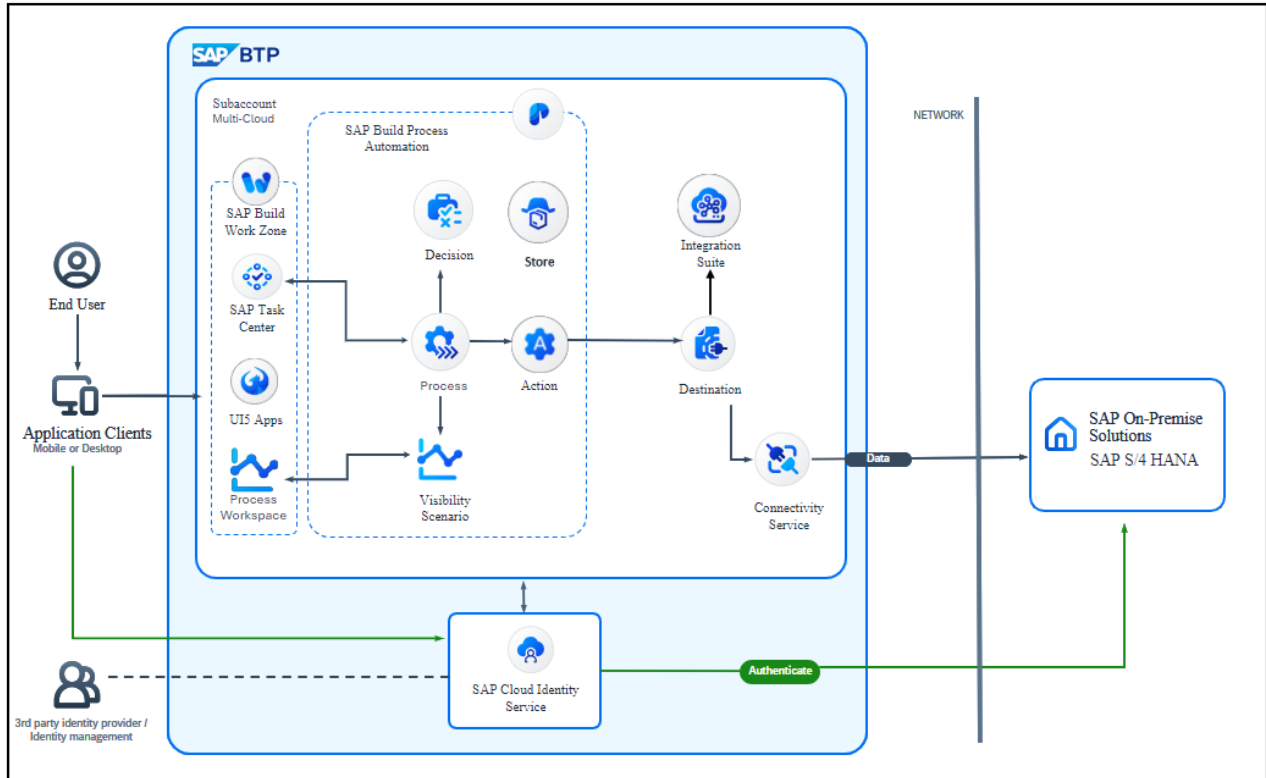
This package enables sending notifications to the responsible users assigned to the production planners of the affected maintenance orders in the SAP plant maintenance, allowing the production planner to review the dates in the maintenance order and make new proposals. Maintenance planner will receive a notification on the new proposed date and can either accept this new date or propose another date for the order.

This content package can be used with both SAP S/4HANA Cloud Private Edition (2023 onwards) and SAP S/4HANA On-Premise

Features:

- Plug and Play with SAP S/4HANA without any additional development.
- Process steps delivered to notify maintenance order.
- Automatic email notification to parties involved.
- 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 indicator

Process Flow Diagram



Solution flow :

1. Once a Maintenance Order is created, the Badi implementation will get executed and an Approval task shall be created.
2. The process will retrieve the maintenance order and send it to the production planner for review.
3. The production planner reviews the proposed maintenance window. User tasks are presented to either approve or reject the date.
4. If rejected, the maintenance planner is notified to replan the maintenance schedule.
5. Once approved, proposed new date is updated against the maintenance order.

Required SAP Business Technology Platform Services

The following SAP Business Technology Platform services are required to consume the **Notify Production of Maintenance Order**:

- SAP Build Process Automation
- SAP Connectivity service
- SAP Integration Suite
- SAP Business Application Studio
- SAP Application Runtime Service

- SAP Work Zone, standard or advanced
- SAP Cloud Identity Services - Identity Authentication (optional)
- SAP Business Technology Platform, Cloud Foundry runtime

Prerequisites

For this template to run successfully the following other prerequisites are needed

- SAP Desktop Agent 3.28 or higher.
- Get access to BTP account.
- Need valid SAP S/4 HANA user.
- This template requires Integration package **SAP Build Process Automation Integration with SAP S/4 HANA for Notify Production of Maintenance Order** to run. You can download this package separately from the store. The guide to set-up and configure integration package is mentioned along with the integration package itself.

Configuration Guide

Notify Production of Maintenance Order template requires SAP Build Process Automation subscription. Follow the [setup and configuration section](#).

Setup Business Technology Platform Cockpit

Configure SAP Build Process Automation Destination

To Access the SAP Build process Automation, you can configure the destination. Please create destination accordingly

Destination Property	Value
Name	sap_process_automation_service
Type	HTTP
URL	<" endpoints"."api">
Client ID	<"uaa"."clientid">
Client Secret	<"uaa"."clientsecret">
Token Service URL	<"uaa"."url">/oauth/token
Proxy Type Internet	Internet
Authentication	OAuth2ClientCredentials

Add the property **sap.processautomation.enabled** as **true** to view the destination in the SAP Build Process Automation tenant. Please refer [help document](#) for more details.

Configure SAP S/4HANA Destination

This content package can be used with S/4HANA Cloud On Premise. Destinations can be created accordingly.

Destination Property	Value
----------------------	-------

Name	<Name>
Type	HTTP
URL	<SAP S/4HANA endpoint> Example: https://<s4system-name>-api.xxxxxxxx
Proxy Type Internet	Internet
Authentication	Basic Authentication
Username	<Username> of the SAP S/4HANA Communication User
Password	<Password> of the SAP S/4HANA Communication User

Configure SAP Integration Suite Destination

Configure Destination to connect to Integration Suite destination cloud system

Destination Property	Value
Name	IntegrationSuite
Type	HTTP
URL	<Integration Suite Destination endpoint> <a href="https://<cpi>.hana.ondemand.com">https://<cpi>.hana.ondemand.com
Proxy Type Internet	Internet
Authentication	Basic Authentication
Username	<Username> of the SAP S/4HANA Communication User
Password	<Password> of the SAP S/4HANA Communication User

Configure SAP Build Process Automation Email Destination

Mail notifications are used in this template to send notifications to requestor, approver, and admin during different stages of the process. Follow the instructions to setup mail destination in your SAP Business Technology Platform Account.

Configuring destination, [Configure Mail Destination](#)

- For more information refer to Create [HTTP Destinations](#) and [OAuth User Token Exchange Authentication](#).

User Roles Configuration

To access this template, the business user will need these roles:

Role Collection Name	Purpose
TaskCenterAdmin	Permission to execute calls to the connector status API and monitor configured destinations and running background jobs.
Process Automation Developer	Standard Business User, can model and publish processes

ProcessAutomationParticipant	To execute (like accessing MyInbox, running the automations, etc.) this content package, you need to have this role assigned to the respective user.
ProcessAutomationAdmin	To perform process admin activities like accessing monitoring applications etc., you need to have this role assigned to the respective user.
Business_Application_Studio_Administrator	Allows administrators to manage (export and delete) user data.
Business_Application_Studio_Developer	Allows developers to load and develop applications using SAP Business Application Studio.

For more information about SAP Build Process Automation roles, see [Authorizations](#).

Cloud Connector Configuration

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

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

Resources	Protocol	Backend-Type
WORKORDER_UPDATE	Badi	SAP S/4HANA
ZCL_WF_MAINT_ORDER_TRIGGER	Class	SAP S/4HANA

Setup Content Package

Import SAP Build Process Automation content

Standard automation packages released by SAP will be available at the store .To know more about the store visit [SAP Build Process Automation Store](#)

This template can be downloaded from the Store:

1. Navigate to the Store in your SAP Build Process Automation account.
2. Select the Project Type filter as “Business Process.”
3. In the Search bar type **“Notify Production of Maintenance Order”**
4. Select the “Create from Template” button to add the template into your lobby.
5. After successfully adding the template, navigate back to the lobby to find the **“Notify Production of Maintenance Order”** template available for use.

Caution: Be sure to select the **Project Type** as **“Business Process”** in the filters.

Import and deploy TASK UI application

The content package requires the SAP UI5 user interface which is available in Notify Production of Maintenance Order Process content package. There is only one UI5 interface:

Task UI Application – Date Approval

Following steps can be followed to utilize the SAP UI5 application provided with this process package:

- Download the SAPUI5 application Task UI from the imported store project.
- Open Business Application Studio and import the previously downloaded SAPUI5 project.
- Build SAPUI5 project using mta.yaml file & the generated project (generated mtar file will be available in the mta_archives folder) file can be deployed.

Configuration & Modification

Once you have added the content to your lobby, you will find the project in your project list. Adapt the content template based on your requirements, and then release and deploy from the Lobby.

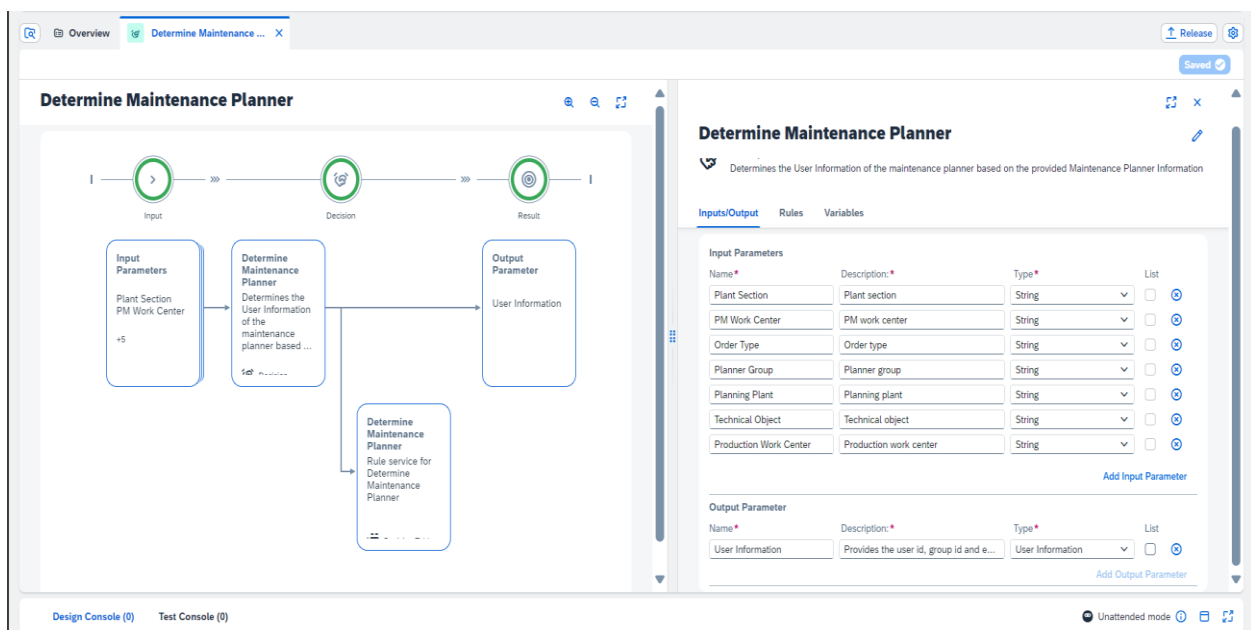
Configure Decisions

There are 2 decisions in this template. We can configure as required.

1. Determine Maintenance Planner

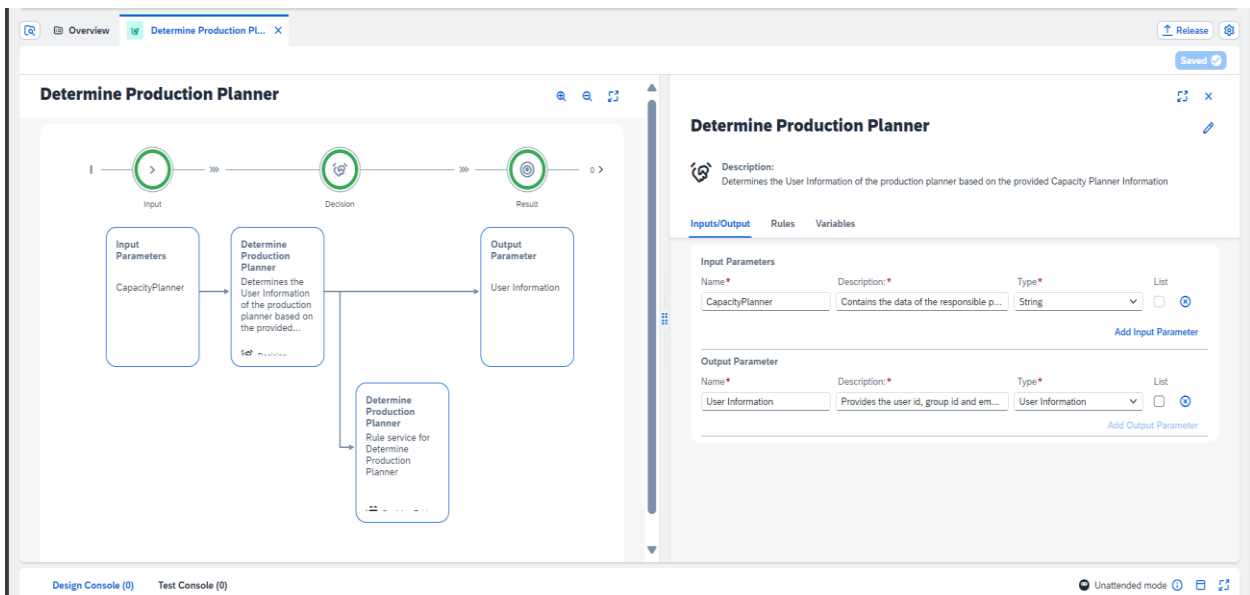
Determines the User Information of the maintenance planner based on the provided Maintenance Planner Information. To modify the decision:

- In process editor, double click to open the decision.
- Select the rule from the decision diagram.
- Edit the rule to add more rows or update existing values.



2. Determine Production Planner

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



Configure Email

Email notifications are sent to requestor and approver at different places during process and task execution. All the email artefacts in the process have default template body which can be changed.

To update the email body content, do the following:

- Select the mail artefact in the process.
- From the **Settings** in the right-side panel, check the **Mail Header** to confirm the **To** field (or email recipients) and the **Subject**. You can adjust the subject and recipient, if needed.
- You may also add someone in **CC**.
- Click to Open '**Mail Body Editor**'.

Mail Body

Dear Process Admin,

The task for review of maintenance date in Process package "Notify Production of Maintenance Order" for Maintenance Order **MAINTENANCE_ORDER** by the Production Planner is not being worked on. Please take the appropriate actions.

This is a system generated email, please do not respond to it.

- The mail editor allows you to write and adjust text according to your needs. You can also reuse information that has been collected during the process. If you want to use additional process context data, you can simply drag the fields from the left menu to the editor on the right.

For more information on email configuration and text, refer to this [link](#)

In case any further extension needs to be made then follow the reference links below

Create Process

[Create a Business Process | SAP Help Portal](#)

Create Forms

[Create a Form | SAP Help Portal](#)

Create Automation

[Create an Automation | SAP Help Portal](#)

Create Decision

[Create a Decision | SAP Help Portal](#)

Create Process Visibility Scenario

[Create a Visibility Scenario | SAP Help Portal](#)

Release and Deploy the Process

After configuring your process, it's time to publish, test and run it. To run a process, you must first release and deploy it.

Release - This locks the version of your process, meaning that no further edits can be made to that version.

At this stage, the process can't be run and isn't available to participants yet.

To release a version of your process:

- First ensure that the status is listed as 'Editable'.
- Then click 'Release'.

For more information please visit: [SAP Build Process Automation](#)

Note: If this is the first time you've released the process, a version labelled 1.0.0 is released. For subsequent releases, you're prompted to select a version type before the process is released.

Import Destination

Actual destinations that are created in SAP BTP cockpit will be required when you deploy the process. This destination will be mapped to the destination environment variables during deployment.

To configure destination,

- Click on **Control Tower**.
- Select **Destinations** from the right panel.
- Click **Add**

Select the destinations created in the setup section to be added.

For more information and screen shots, please refer to the below link: [Manage Destinations](#)

Deploy – This takes a released version of a process and enables it to be actively run and monitored. A deployed version of this approval process unlocks the request form, allowing participants to submit requests and the approvers to view items in their inbox.

To deploy a released version of your process,

- First ensure that the status is listed as 'Released'.
- Then click '**Deploy**'.

For more information and screen shots, please refer to the below link: [Deploy Project](#)

To deploy your project, you will be prompted to provide a destination as an environment variable. Select the destination from the drop-down and fill other environment variables as well.

- **IntegrationSuite:** Business Technology Platform destination to connect with SAP Integration Suite APIs.

Note: If you do not map your destination environment variable with actual SAP Business Technology Platform destination during deployment, then the process will enter erroneous state when it tries to connect to the external system.

User Guides

Capabilities

The following are the capabilities of this template:

For detailed information about different artifacts, please refer [help documentation](#)

Type	Name	Description
Decision	Determine Production Planner	Decision to determine production planner information
Decision	Determine Maintenance Planner	Decision to determine maintenance planner information.
Process	Initialization	Process to initialize default values for process control and history.
Process	Approve Maintenance Date	Process to approve the default maintenance window or propose new maintenance window.
Process	Update Maintenance Order	Process to update the maintenance order in the SAP S/4HANA system.
Process	Finalize	Process to send summary mails to both production planner and maintenance planner
Form	Production Planner Admin form	Form for admin to update production planner manually if not determined from decisions.
Form	Maintenance Planner Admin form	Form for admin to update maintenance planner manually if not determined from decisions.
Form	Handle Update Issue	Form for displaying errors in maintenance order update to the requestor.
Form	Date Approval	Form for approval of maintenance date or propose new date.

Data type	Order	Data type for order header, status and operation details.
Data type	Process Control	Data type for process control details like approval history, production planner and maintenance planner.
Data type	User Information	Data type for approver and admin details.

Actions

Notify Production of Maintenance Order – Update Action

Action project to update proposed new date against the maintenance order.

Method	API	API Path	Purpose
POST	N/A	/http/wfmMaintOrderNotif/updateOrderDate	Action project to update proposed new date against the maintenance order.

Appendix

Implement the BADIs

Please follow the instructions from the link to implement the BADIs with the code from the archive attached to the process: [How to implement a Badi](#)

Please implement the following BADIs:

1. WORKORDER_UPDATE
 - a. Implement method PROCESS_ORDER of the class from the archive in the BAdI method IF_EX_WORKORDER_UPDATE~BEFORE_UPDATE.

Support

There is no support available for template content. If you experience general issues with SAP Build Process Automation, please follow the links below:

- [Troubleshoot Support Guided Answer](#)
- [Test an Automation Help portal Article](#)
- [Test an Application Help portal Article](#)
- [Get traces Support Guided Answer](#)

If the issue persists, please raise an incident via SAP Support Portal on **BPI-PA-BPC** component.

This template can be modified using SAP Process Automation. For example: add decisions to determine the approver based on a certain business logic or add an action to post collected information to backend SAP system. Refer [help portal](#) for more details.

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