

SAP BUSINESS TECHNOLOGY PLATFORM | EXTERNAL

Technical Configuration Guide

Product Change for Utilities

THE BEST RUN 

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Overview

This document provides technical information about what needs to be configured to run the workflow management package *Product Change for Utilities*. This document is intended to be read by technical personas, such as IT administrators or developers. The document describes what needs to be done to operate the solution. It mainly focuses on technical configurations, such as destinations for example, and less on business configuration that can be performed by a key user or a business process expert.

Involved Solution Components

This chapter provides an overview of involved solution components in SAP Cloud for Utilities that are used to run the Workflow Management Package *Product Change for Utilities*.

- SAP Integration Suite
- SAP Workflow Management (subscribed service)
- SAP Cloud for Utilities Foundation (subscribed service)
- SAP S/4HANA Utilities
- SAP Subscription Billing

General Prerequisites

This chapter provides an overview of general prerequisites in SAP Cloud for Utilities that need to be met to make Workflow Management package *Product Change for Utilities* process run.

Note! In an order-to-provisioning scenario, this artifact follows the “Determine Business Scenario” artifact.

Procedure

Before using the Workflow Management package *Product Change for Utilities*, make sure that following requirements are fulfilled:

1. [Global account](#) on SAP Business Technology Platform

- You have an enterprise account in the SAP Business Technology Platform.
- You have setup the subaccount and spaces on the Cloud Foundry environment.

2. SAP Business Technology Platform Services

- You have set up the [Workflow Management Service](#) in your SAP Business Technology Platform cockpit
- You have set up the [SAP Integration Suite](#) tenant
- You have configured SAP Cloud for Utilities Foundation (subscribed service)

3. Target system as in use

- You have configured SAP Subscription Billing
- You have configured SAP S/4 HANA Utilities

Product Change for Utilities

SAP Integration Suite Artifacts

This chapter provides an overview of integration content in SAP Cloud for Utilities that can be used to run the Workflow Management package *Product Change for Utilities*.

Integration Flows related to the process:

Integration Flows for Product Change for Utilities

Integration Flows serve to send/receive data to external systems. In Integration Flows it is possible to manipulate with data, for example, doing fields mapping. Table 1. Integration Flows. represents the list of Integration Flows to support *Execute Product Change* process.

Table 1. Integration Flows.

Integration Flows Name	Integration Flows endpoint	Detailed Description
Update Non-Commodity Subscriptions in SAP Subscription Billing	/http/UpdateSubscription	The purpose of this integration flow is to create a change Subscription order in SAP Cloud for Utilities foundation and send the response to SAP Workflow Management.
Update Utility Sales Contracts in SAP S/4HANA	/http/ChangeUtility	The purpose of this integration flow is to create a change Utility/Deregulated order in SAP Cloud for Utilities foundation and send the response to SAP Workflow Management.

View SAP Help [Integration Guide](#) for more details.

Process Artifacts

The cycle consists of multiple subprocesses around the following steps:

- Request for Change is documented
- Type of changed item is defined
- Item is changed

When this cycle is completed, the collection of data around the process is possible. SAP Cloud for Utilities with Workflow Management Service enables to manage these processes, pinpoint inefficiencies and identify opportunities for improvement.

This chapter provides an overview of process artifacts in SAP Cloud for Utilities that are created to run the Workflow Management Package *Product Change for Utilities*.

Process for Assign Change Process

A process based on the SAP Workflow Service allows to quickly orchestrate tasks that span across people, applications, and organizations. Table 2. Process. represents the list of processes defined to support the *Assign Change Process* artifact.

Table 2. Process.

Process	Detailed Description
Assign Product Change Process	Process is used to determine the consecutive Execute Product Change process scenario

Table 3. Workflows. Workflows represents the list of Workflows defined to support *Assign Change Process* artifact.

Table 3. Workflows.

Workflows	Detailed Description
assignchangeprocess	This workflow is using a Business Rule to identify and split commodity and non-commodity items

Table 4. Process Attributes. represents the list of attributes defined to support *Assign Change Process* artifact.

Table 4. Process Attributes.

Process Attributes	Detailed Description
Order ID	Customer Order ID from Customer order

Variants for Assign Product Change Process

The variants serve as extension points of the default process.

Procedure

Before using the process variants to run the Workflow Management Package *Product Change for Utilities*, make sure that following requirements are fulfilled:

1. Configure Process Variants

- You have configured Process Variants using Process Flexibility cockpit
 - Workflow Management Package *Product Change for Utilities*
 - Go-to Process Variants and create the process variant,

Note! There are mandatory steps already available.

- Make the necessary changes by dragging-and-dropping available steps into variant editor.

2. Activate Process Variants using Process Flexibility cockpit

- You have *Save* and *Activate* the Process Variant.

Table 5. Variants.

Variant	Workflow Definition Id	Detailed Description
Assign Product Change Process	assignchangeprocess	The process variant defines item type and configures the process step workflow in the variant

Business Rules for Assign Change Process

SAP Business Rules can be used to simplify the management of decision logic across SAP solutions, encapsulate the business logic. They also support the reuse of decision logic across different business processes. Table 6. Rules. represents the list of rules used to create an order items grouping by business scenario and trigger an appropriated process.

Note: Please find more details on the Business Rules in the Parameters/Defaults section,

Table 6. Rules.

Rules	Detailed Description
Determine Product Change Process	A text rule used to identify a process ID that should be triggered based on the order item type, division, sales organization and distribution channel.

Procedure

Before using the business rules to run the Workflow Management Package *Product Change for Utilities*, make sure that following requirements are fulfilled:

1. Configure Business Rules

- Configure business rules using Process Flexibility cockpit,
 - Open Workflow Management Package *Product Change for Utilities*
 - Go-to Decisions and choose the Decision you would like to adjust,
 - Go-to Rules section and click *Edit* to make the necessary changes.

2. Activate Decisions using Process Flexibility cockpit

- *Save* and *Release Version* of Decision.

Process for Execute Product Change

A process based on the SAP Workflow Service allows to quickly orchestrate tasks that span across people, applications, and organizations. Table 7. Process. represents the list of processes defined to support the Execute Product Change process.

Table 7. Process.

Process	Detailed Description
Execute Product Change	Process is used to implement Execute Product Change process scenario

Table 8. Workflows Workflows represents the list of Workflows defined to *Execute Product Change* artifact.

Table 8. Workflows

Workflows	Detailed Description
Change Order Item	Process step to Change Commodity order item in SAP S/4HANA and to Change Non-Commodity order item in SAP Subscription Billing.

Table 9. Process Attributes. represents the list of attributes defined to support *Execute Product Change* artifact.

Table 9. Process Attributes. Change Non-Commodity Subscription Order Item

Process Attributes	Detailed Description
Order ID	Customer Order ID from Customer order

Variants for Execute Product Change

The variants serve as extension points of the default process.

Procedure

Before using the process variants to run the Workflow Management Package *Product Change for Utilities*, make sure that the following requirements are fulfilled:

1. Configure Process Variants

- You have configured Process Variants using Process Flexibility cockpit
 - Open Live Process Package *Product Change for Utilities*,
 - Go-to Process Variants and create the process variant,
Note! There are mandatory steps already available.
 - Make the necessary changes by dragging-and-dropping available steps into variant editor.

2. Activate Process Variants using Process Flexibility cockpit

- Click *Save* and *Activate* the Process Variant.

Table 10. Variants.

Variant (example values below)	Workflow Definition Id (example values below)	Detailed Description (example values below)
Execute Product Change	executeproductchange	Default process variant that changes the product
Change Commodity Product Order Item	changecommodityproductorderitem	Process variant that Changes Commodity order item in SAP S/4HANA
Change non-commodity subscription order item	changenoncommoditysubscriptionorderitem	Process variant that Changes Non-Commodity order item in SAP Subscription Billing

Visibility Scenario for Product Change for Utilities

SAP Process Visibility enables process excellence, process transparency and process transformation by providing one view of a process, regardless of where it runs – SAP or non-SAP, cloud or on-premise. Table 11. Visibility. represents the list of visibility scenarios to support the *Execute Product Change* process.

Table 11. Visibility.

Visibility Scenario	Detailed Description
Visibility Scenario for Product Change for Utilities	This visibility scenario shows what kind of items should be changed and calls related Change Order Item process for Commodity or Non-Commodity items and ensures the process transparency layer to monitor Change of a commodity order item or a non-commodity order item

Procedure

Before using the process visibility to run the Workflow Management Package *Product Change for Utilities*, make sure that following requirements are fulfilled:

1. Configure Process Visibility dashboard

- Configure Process Visibility dashboard using Process Flexibility cockpit
 - Open Workflow Management Package *Product Change for Utilities*,
 - Go-to Visibility Scenarios and choose the visibility scenario you would like to adjust,
 - Make the necessary changes.

2. Activate Process Visibility dashboard using Process Flexibility cockpit

- *Save* and *Activate* the Process Visibility dashboard.

Parameters / Defaults

In order for Business Rule to execute correctly the decision table should be maintained in the rule itself. A decision table expression sequentially processes business rules based on a set of inputs. At runtime, the input data that is supplied to the decision table is compared against the defined conditions, starting with the first row. All cells are evaluated by checking the column value against a number of range comparisons. For each cell, a boolean result is returned. If all cells in a row are evaluated as true, the evaluation stops, and the expression returns the result associated with the current conditions. Otherwise, processing continues with the next table row until either a matching set of conditions is found, or the end of the table is reached.

The decision table below represents the list of defaults that are set to support an order items grouping by specific preset of attributes and trigger the subsequent process for grouped or not grouped order items. See chapter *Business Rules* for more information.

The Decision table of the rule consists of 2 parts – Condition part described by “If” part of the statement and result part described by “Then” part of the statement. The result will be returned in case if specific condition is evaluated as *true*.

Determine Product Change for Utilities

In this specific Business Rule condition consist of input values of Item structure defined in Data Objects: order type, order sales org, order distribution channel, and order division values passed from the workflow context and result consists of Identification and grouped flag which value provides the Identification of the subsequent process that should be triggered after an execution of this Business Rule.

Grouped flag can be set to true or false and by this process can be influenced to group or not to group similar items.

This is just an example how Business Rule can be filled. Input and result of Business Rule can be adjusted based on the customer requirement. The “order.type” column of the Input table and the “Identification” column of the Result table, should not be changed. The remaining columns are configurable.

Decision Table					
If				Then	
order.type	order.distributionChannel	order.salesOrg	order.division	Identification	Grouped Flag
<input type="text" value="='UCM1'"/>	<input type="text" value="='U1'"/>	<input type="text" value="='U100'"/>	<input type="text" value="='01'"/>	<input type="text" value="'changecommodityor..."/>	<input type="text" value="false"/>
<input type="text" value="='USB1'"/>	<input type="text" value="='U1'"/>	<input type="text" value="='U100'"/>	<input type="text" value="='01'"/>	<input type="text" value="'changenoncommodit..."/>	<input type="text" value="true"/>

Table 12. Defaults.

Rules	Detailed Description					
DetermineProductChangeProcess	Project Name		DetermineProductChangeProcess			
	Project Id		42f0e1fc7cc04860a7918c485a8b8cf2			
	Rule Name		DetermineProductChangeProcess			
	Rule Id		a6e4af90a3124030a1dd519b55003ca0			
	Input				Result	
	order.type (example values below)	order.sales Org (example values below)	order.distribution Channel (example values below)	order.division (example values below)	Identification (example values below)	Grouped flag (example values below)
	= 'AAA1'	= 'A100'	= 'A1'	= '00'	'executeproductchange'	true
	= 'UCM1'	= 'U100'	= 'U1'	= '01'	'changecommodityorderitem'	false
	= 'USB1'	= 'U100'	= 'U1'	= '01'	'changenoncommodityorderitem'	true

Determine Service Endpoint for Target Systems

In this specific Business Rule conditions consist of input values of Item structure defined in Data Objects: item type and item action values passed from the workflow context and result consists of URL and system which will be used to execute the following steps of the process.

This is just an example how Business Rule can be filled. Input and result of Business Rule can be adjusted based on the customer requirement. The “type is equal to” and “action is equal to” columns of the Input table and “url” column of the Result table should not be changed. The “system” column of the Result table is configurable.

Table 13. Defaults.

Rules	Detailed Description			
DetermineServiceEndpointForTargetSystems	Project Name		DetermineServiceEndpointForTargetSystems	
	Project Id		af355833cce64024899fa40c42398b93	
	Rule Name		DetermineServiceEndpointForTargetSystems	
	Rule Id		cbd39a2acf99491dba456f183ca9aa0f	
	Input			
	type is equal to (example values below)	action is equal to (example values below)	url (example values below)	system (example values below)
	'USB1'	'change'	'/http/UpdateSubscription'	'c4u-sb'
	'UDRE'	'change'	'/http/ChangeUtility'	'C4U_340' 'EMT_342'
	'UCM1'	'change'	'/http/ChangeUtility'	'C4U_340' 'EMT_342'

Destinations

This chapter provides an overview of destinations in SAP Cloud for Utilities that are used to run the Workflow Management Package *Product Change for Utilities*.

Procedure

Before using the Workflow Management Package *Product Change for Utilities*, make sure that the following requirements are fulfilled:

1. Configure destinations in SAP Business Technology Platform

- Configure destination with SAP Business Rules called *BR* and use service instance details to make the connection <https://{wfm-tenant}.hana.ondemand.com>
- Configure destination with SAP Integration Suite Services called *CPI* and specify the URL like <https://{cpi-tenant}.hana.ondemand.com>.

SAP Help [Link](#) on how to set up destinations.

Note! Destination types are HTTP supported and based on OAuth 2.0 Client Credentials or Basic Authentication.

Communication System, Communication Arrangement

This chapter provides an overview of communication system and arrangements in SAP Cloud for Utilities that needs to be configured to make the solution run.

Roles / Authorizations

In SAP Cloud for Utilities, business process includes an optional activity that is used to handle approval process. For more details on Roles and Authorizations visit: [Authorization Configuration - SAP Help Portal](#)

Procedure

Before using the process defined to run the Workflow Management Package *Product Change for Utilities*, make sure that following roles are assigned to users (see table below).

For additional help see [Workflow Management Roles](#)

Table 14. Roles.

Role	Description
WMDeveloper	Permission to access Manage Packages that allows you to perform the following actions: <ul style="list-style-type: none">• View Workflow Management Packages• Create, edit, save, and activate Workflow Management Packages• Export and import Workflow Management Packages• Delete Workflow Management Packages
WMBusinessExpert	Permission to access Process Flexibility Cockpit that allows you to perform the following actions: <ul style="list-style-type: none">• Discover and explore pre-delivered Workflow Management Packages• Import Workflow Management Packages Configure process variants, decisions, and visibility scenarios within Workflow Management Packages
WMAdmin	Permission to access Manage Packages that allow you to perform the following actions: <ul style="list-style-type: none">• View Workflow Management Packages• Export and import packages• Delete Workflow Management Packages

Lifecycle Management

SAP recommends that you create additional accounts for testing, quality assurance, and production, so that you have distinctive separation of data and authorizations for each. Ideally, this setup follows the same separation that you use on your back-end system, minimizing external exposure of production data. New accounts are not preconfigured, so you will need to set up the SAP Business Technology Platform accordingly.