

SAP BUSINESS TECHNOLOGY PLATFORM | EXTERNAL

Configuration Guide

Reconnection Process using SAP Build Process Automation or SAP Workflow Management

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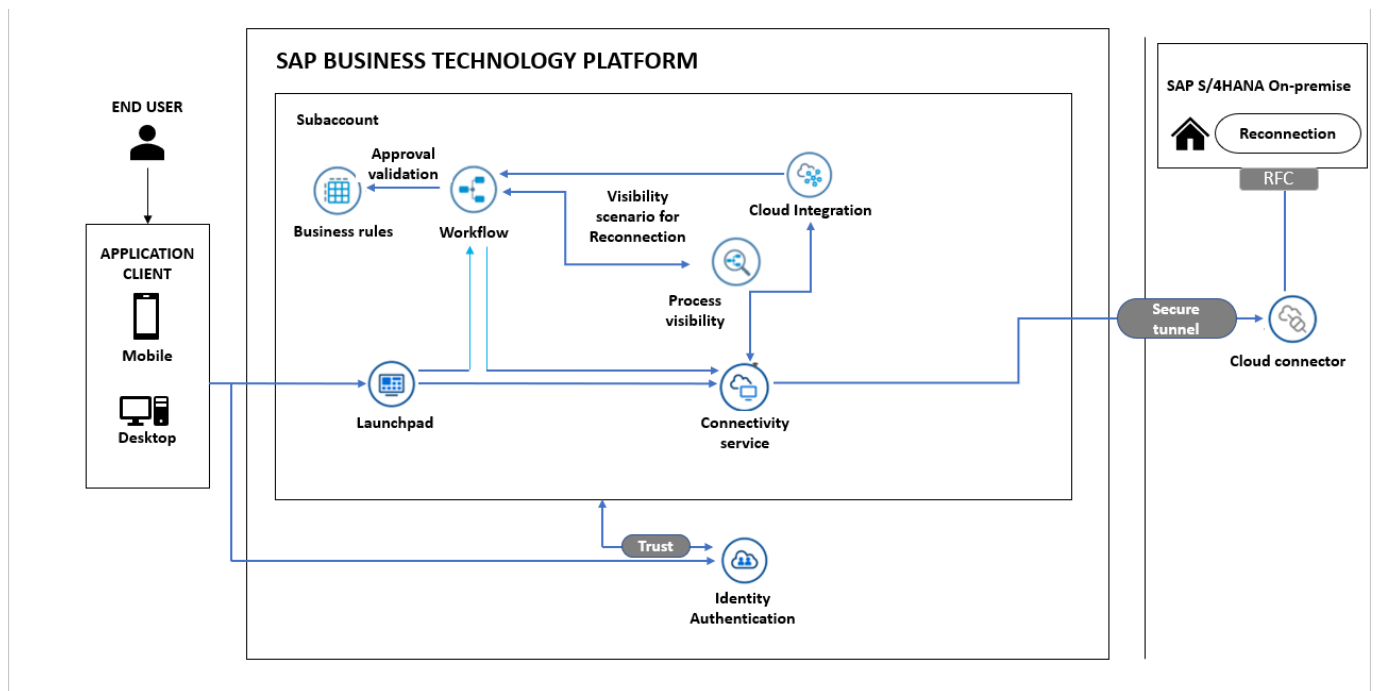
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Overview

This document provides information about how to configure the Reconnection Process workflow content package. Business Process Experts and Process Operators are the target users of this document. Reconnection Process content package for SAP S/4HANA enables to automate reconnection requests in a flexible and transparent way. When a user submits a request for reconnection, a pre-configured process variant is triggered in SAP BTP based on business conditions configured by process expert.

Salient features of this content package are mentioned below:

- Plug and Play with SAP S/4HANA.
- Automatic email notification to parties involved.
- Business Rules provides flexibility in determining approvers strategy and approvers.
- New variant of the process can be created using the pre-delivered process steps in a no-code / low-code approach.
- Flexibility in approver determination either via Plant or Connection Object.
- Out-of-the-box visibility into key process performance indicator.



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 Reconnection Process package contains the following process template:

Reconnection – Establish an approval process for the creation of reconnection order, update the meter reading for the reconnection process. It includes two 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 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 the Reconnection Process.

Table 1. Process Steps

Process Steps	Cardinality	Detailed Description
Create Reconnection Order	1..1	This step/sub flow has activities to initiate and complete reconnection order approval and create the reconnection order in SAP S/4HANA. The approver is determined based on various conditions using a business rule and the step level attributes. Based on the step level attribute configured in the process variant, approver can be determined either via Plant or Connection Object. The approvers are automatically notified via mail about the approval task.
Update Meter Reading	1..1	This step/sub flow has activities to initiate and complete meter reading submission and updating meter reading in SAP S/4HANA. This step will also close the service request and TECO after successful meter reading editing. The approver is determined based on various conditions using a business rule and the step level attributes. Based on the step level attribute configured in the process variant, approver can be determined either via Plant or Connection Object. The approvers are automatically notified via mail about the approval task.

A process step can have customizable properties and they could influence the outcome of the process step. For example, the Create Reconnection Order and Update Meter Reading have Approval Method as a configurable parameter in which user can select either Plant or connection Object based on which the approver will be determined. Please see Table 2 for more details.

Table 2. Process Step Properties

Process Step	Properties	Detailed Description
Create Reconnection Order	Approval Method	Step attribute used to determine whether to determine approver based on plant or connection object. If the user wants to determine approver at a higher level a single approver for all the connection object under a plant, then they can choose Plant. To determine approver based on the connection object under a Plant, they can use Connection object-based approver.
Update Meter Reading	Approval Method	Step attribute used to determine whether to determine approver based on plant or connection object. If the user wants to determine approver at a higher level a single approver for all the connection object under a plant, then they can choose Plant. To determine approver based on the connection object under a Plant, they can use Connection object-based approver.

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
Meter Update Status	Status of the meter read update after successful approval and posting to SAP S/4HANA
TECO status	Technical Completion Status for the service request
Order Status	Reconnection order status after successful approval and posting to SAP S/4HANA
Approval Method	Approval method used to determine approver, plant based or connection object based.
Installation Number	Installation number for the reconnection request
Service Request Number	Service request number for the reconnection request
Business Partner	Business partner for the reconnection request
Document Number	Disconnection document number used for reconnection
Connection Object	Connection object used for reconnection
Plant	Plant used for reconnection
Service Request Type	Service request type used for reconnection
Division	Division used for reconnection
Premise	Premise used for reconnection
Process Variant	Process variant used in reconnection

Sample Conditions to directly start a variant Workflow

```
{
"EnergizationRequest": {
  "discno": "000000000257",
  "dstatus": "21 (Disconnection carried out)",
  "installationNumber": "3000000028",
  "businessPartner": "1000000052",
  "serviceRequestNumber": "8000000247",
  "connectionObj": "1000000075",
  "premise": "2000000020",
  "division": "01",
  "divisionTxt": "Electricity",
  "reconPlannedDate": "13.01.2022",
  "reconPlannedTime": "18:28:02",
  "procVar": "CUST",
  "status": "01",
  "devices": [
    {
      "logiknr": 119,
      "eqnr": "1000040",
      "eqktx": "Meter with 1phase",
      "matnr": "1",
      "sernr": "908081567",
      "maktx": "Meter with 1phase",
      "vZwstand": 12,
      "nZwstand": 0,
      "messageType": "",
      "message": ""
    }
  ],
  "plant": "1000",
  "serviceReqType": "<custom request type, example ZER>",
  "history": [],
}
"Status": {}.
```

```
"internal": {},
"Requester": {
  "MailID": "<Mail ID of the requester>"
},
}
```

Process Variants

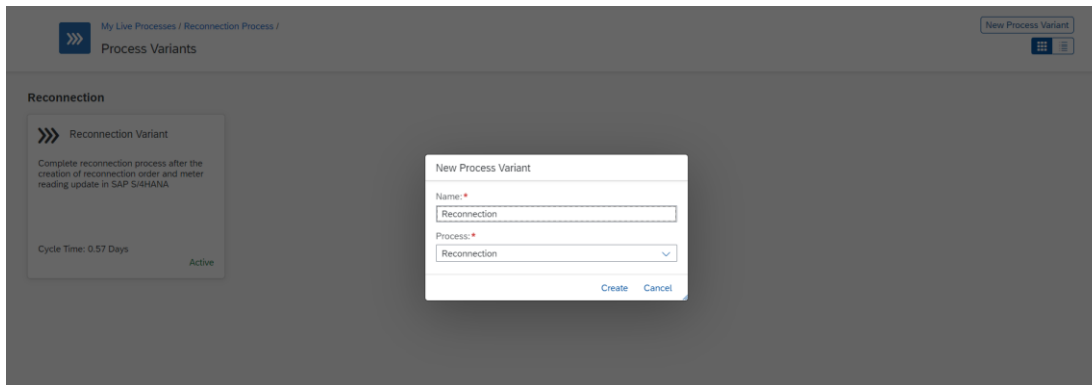
A process variant consists of multiple process steps configured by a line of business expert. It is possible to create multiple variants of the same process. Please refer [help documentation](#) about how to import content packages and configure a process variant.

Import Reconnection Process and Configure Process Variants with SAP Build Process Automation

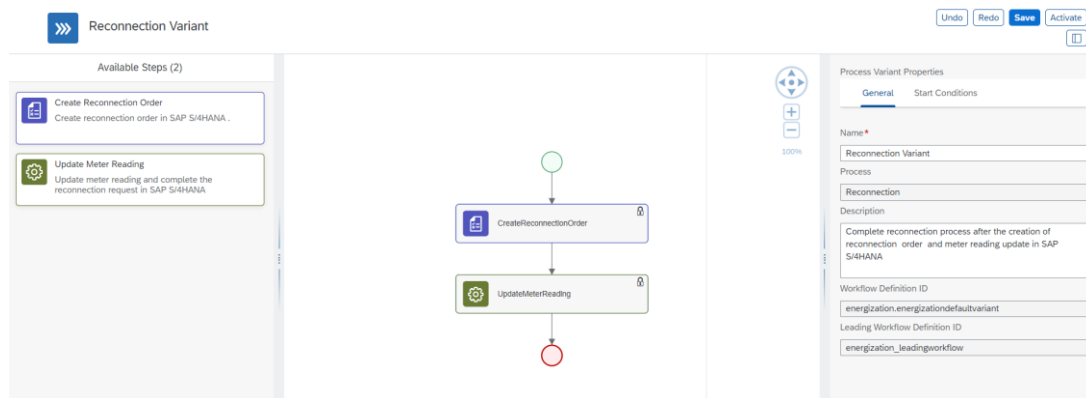
1. In the [SAP Build Process Automation Store](#), search for live process package Reconnection Process and import the same. This content package has one process template and process variant(s) for that template.
2. In the Application Development [Lobby](#), click to open the package with name Reconnection 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 Reconnection 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 Reconnection Process and Configure Process Variants with SAP Workflow Management

1. In Process Flexibility Cockpit app, search for content package **Reconnection Process** and import the same.
2. To create a new variant of Reconnection Process, open content package Reconnection Process in Process Flexibility Cockpit and click on Process Variants tile.
3. Click New Process Variant.
4. Enter the Name for the new Process Variant and select “Reconnection” as Process.
5. Click on Create button.
6. Click the newly created Process Variant tile to save and activate the process variant.



7. The Process Variant has two steps Create Reconnection Order and Update Meter Reading



8. Configure Step Property "Approval Method" for Create Reconnection Order. Step property is used to determine the Approver using the business rule Determine Approver Plant or Determine Approver Connection Object.
9. Configure Step Property "Approval Method" for Update Meter Reading. Step property is used to determine the Approver using the business rule Determine Approver Plant or Determine Approver Connection Object.
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 Definition application in the 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 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.

Reconnection Process Process enable customers to flexibly configure decisions to gain flexibility to

1. Determine Approval Strategy
2. Determine Approver by Plant

3. Determine Approver by Connection Object
4. Determine Process Administrator

Determine Approval Strategy

This rule is used for determining the strategy for approver determination whether it will be from business rules or from external service.

1. **Rule Service Name:** DetermineStrategy

Input: GLData (Structure data type)

ATTRIBUTE	TYPE	DESCRIPTION
Service Request Type	String	Type of Service Request

Output: Strategyresponse(Structure Type)

Gives the strategy for determining the approver and reviewer

ATTRIBUTE	TYPE	DESCRIPTION
Strategy	String	Strategy for determining approver and reviewer

Rule Definition

Strategy of whether approvers and reviewers are determined via Business rule configuration or external Service configuration are determined in this rule.

Where used

Step: Used in Create Reconnection Order and Update Meter Reading.

Determine Approver by Plant

This rule is used for determining the approver based on plant

Rule Service Name: Determine Approver Plant

1. **Input:** EnergizationRequest (Structure data type)

ATTRIBUTE	TYPE	DESCRIPTION
Plant	String	Reconnection Plant

Output: PlantBasedApprover(Structure Type)

ATTRIBUTE	TYPE	DESCRIPTION
User Group	String	User group of approvers
UserID	String	UserID of approver

MailID	String	MailID of approver
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Rule Definition

Rule to determine the approver in plant-based approval process step based on conditions like Plant.

Where used

Step: Used in Create Reconnection Order and Update Meter Reading

Determine Approver by Connection Object

This rule is used for determining the approver details based on connection object

Rule Service Name: Determine Approver Connection Object

Input: EnergizationRequest(Structure data type)

ATTRIBUTE	TYPE	DESCRIPTION
ConnectionObject	String	Connection object used for reconnection

Output: ConnectionObjectBasedApprover(Structure data type)

ATTRIBUTE	TYPE	DESCRIPTION
User Group	String	User group of approvers
UserID	String	UserId of approver
MailID	String	MailId of approver

Rule Definition

Rule to determine the approver in connection object-based approval process step based on conditions like Connection Object.

Where used

Step: Used in Create Reconnection Order and Update Meter Reading

Determine Process Admin

This rule is used for determining the process admin to assign a new approver and reviewer when the approver and reviewer is not determined.

Rule Service Name: DetermineAdmin

Input: EnergizationRequest(Structure data type)

ATTRIBUTE	TYPE	DESCRIPTION
Service Request Type	String	Type of service request for reconnection

Output: AdminDetails(Structure Type)

ATTRIBUTE	TYPE	DESCRIPTION
UserGroup	String	Usergroup of admin
UserID	String	Userid of admin
MailID	String	Mailid of admin

Rule Definition

Rule to determine the admin, when the approver and reviewer are not determined by "Business rules" or "External service" in approval and review process step based on conditions like service request type,plant,connection object etc.

Where used

Step: Used in Create Reconnection Order and Update Meter Reading

Vocabulary Rules Project

Vocabulary Rules project Reconnection Vocabulary project helps with creation of Start and Step conditions

ATTRIBUTE	TYPE	DESCRIPTION
Business Partner Name	String	Business Partner used for reconnection
Plant	String	Plant
Installation	String	Installation Number
Division	String	Division
Division Text	String	Division Text
Premise	String	Premise
Service Request Number	String	Service Request Number for the reconnection request
Connection Object	String	Connection object used in reconnection
Process Variant	String	Process variant for the reconnection process
Status	String	Status of the request
Process Variant Text	String	Process Variant Text

Determine Plant Based Approver from External Service

Reconnection process content package have the flexibility to determine approver either via Plant or Connection Object. Based on the step attribute configured in the process variant, it can either Plant or Connection Object.

Based on the Service on the Service request type for the particular request approver can be determined either via Business Rules or via External Service. If the Service request type is ZER approver will be determined by Business rules ,for all other cases it should be configured via External Service.

In case of approver determined via plant for any service other than ZER, external service should be configured with following details

API Attributes	Values
Path	/http/ReEnergization/comsapcontentPlantApprover
HTTP Method	POST
Payload sent by workflow (sample data)	<pre>{ "Vocabulary": [{ "EnergizationRequest": { "RequestType": "ZER", "Plant": "1000" } }] }</pre>
Response Payload from integration flow	<pre>{ "Result": [{ "PlantBasedApprover": { "MailID": "abc@email.com", "UnitOfTime": <"H" OR "m" OR "Y" OR "M" OR "D" >, "UserID": <User Id> , "Duration": , "UserGroup" :<User Group> } }] }</pre>

	<pre> } }] } </pre> <p>Note: When Status is not 200, then it is considered a failed service call.</p>
Payload Type	Application / JSON

Determine Connection Object Based Approver from External Service

Reconnection process content package have the flexibility to determine approver either via Plant or Connection Object. Based on the step attribute configured in the process variant, it can either Plant or Connection Object.

Based on the Service on the Service request type for the particular request approver can be determined either via Business Rules or via External Service. If the Service request type is ZER approver will be determined by Business rules, for all other cases it should be configured via External Service.

In case of approver determined via Connection Object for any service other than ZER, external service should be configured with following details

API Attributes	Values
Path	/http/ReEnergization/comsapcontentConObjApprover
HTTP Method	POST
Payload sent by workflow (sample data)	<pre> { "Vocabulary": [{ "EnergizationRequest": { "RequestType": "ZER", "ConnectionObject": "1000000075" } }] } </pre>

Response Payload from integration flow	<pre> { "Result":[{ "ConnectionObjectBasedApprover": { "MailID": "abc@email.com", "UnitOfTime": <"H" OR "m" OR "Y" OR "M" OR "D" >, "UserID": <User Id>, "Duration": , "UserGroup" : <User Group> } }] } </pre> <p>Note: When Status is not 200, then it is considered a failed service call.</p>
Payload Type	Application / JSON

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.

Reconnection 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 Reconnection Process Project.
3. Click to open **Reconnection 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 Flexibility Cockpit.

2. Select Reconnection Process tile.
3. Click Visibility Scenarios tile.

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

Access Process Workspace in SAP Build Process Automation

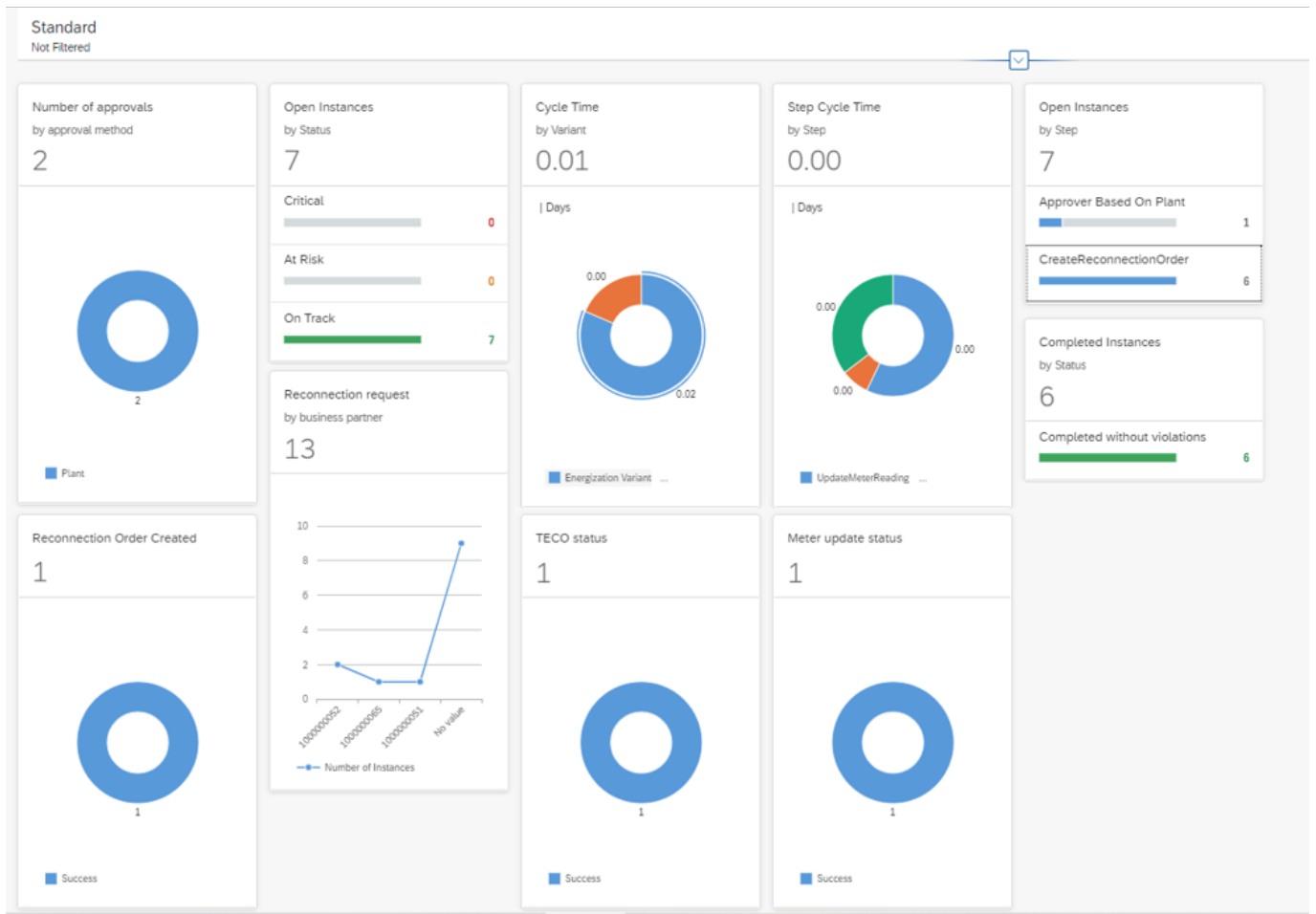
1. The process visibility scenario can be accessed using SAP Launchpad Service. Refer to the help document for [creating UI applications on central SAP Fiori Launchpad](#) for SAP Build Process Automation.
2. Once you have added the applications process Visibility Scenario Instances (with app ID com.sap.spa.pv.instances) and Visibility Scenario Dashboard (with app ID com.sap.spa.pv.ovp), follow the below steps to add a tile to access the Reconnection 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	scenariold
Default Value	com.sap.content.EnergizationProcess
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 “Reconnection 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 Reconnection Process.
3. Click Live Process Insights.
4. User will see the below detailed process visibility dashboard.



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