How to Create your Own Rule in Workflow?

Applies to:
SAP NetWeaver / ABAP, Workflow.

Summary
The article emphasis the rule creation in workflow, the rule is used to pick the right agent at the runtime. From this document the viewer can learn how to create a Rule in workflow for process the Work-item.

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Author Bio
I am P.Surjith Kumar a Workflow Consultant working with Enteg InfoTech, Bangalore for the Past Couple of Years. Currently I am working in Workflow for the past one and half years prior to that I worked in ABAP Report and Upgrade. And My Company Enteg Infotech is a SAP Services Partner Company with a strong vision to deliver solutions that provide enduring value to our customers. Our goal is simple: help our customers realize and exceed their stakeholders’ expectations.
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Rule – PFAC

In the Workflow, **Agent** is person who receives and processes the workitem, this agent can be picked in one of the following ways.

1) Role  
2) Rule  
3) Organizational Unit  
4) Job  
5) Position  
6) Work Center  
7) User  
8) Expression  
9) Workflow initiator (expression)

In the above mention ways using the RULE how the agent is picked is explained in detail. In the Rule there are various categories available that are mentioned below, in this article “**Agent Determination : Function to be Executed**” category of the RULE demonstrated.

The RULE is Created or Changed in the Transaction Code PFAC.

The possible Categories in Rule definition are

1) Agent Determination : Responsibilities  
2) Agent Determination : Organizational Data  
3) Agent Determination : Function to be Executed  
4) Agent Determination : Function to be Executed asynchronously  
5) Agent Determination : Organizational Model  
6) Webflow : Specification of URL  
7) Webflow : XML Format  
8) Webflow : Authentication  
9) Webflow : Send  
10) Webflow : Determine Format (if Group)  
11) Webflow : Signature
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**Business Scenario**

When a Travel Request is created using the Transaction “TRIP” a workflow get triggered and an approvals request is sent to the approvers for Approval.

*Approver (Agent) Picking:*

The approver should be the User Responsible of the Creator’s (Employee) Cost Center.

*Logic Used:*

The Creator’s (Employee) Cost Center has to find in the table FTPT_REQ_ACCOUNT based on the Employee number and the Trip Number. Then using the Same Cost Center the User Responsible has to Picked from the Table CSKS.

And the Travel Approval Request is sent to the respective person User Responsible of the Cost Center.

**Rule Creation Step by Step**

The following seven steps are necessary to create a Rule for a workflow.

1) PFAC - Transaction to Create Rule
2) Select the category “Agent Determination: Function to be Executed” in the rule.
3) Create a Function Module to Pick the Agent
4) Include the Function module and save it
5) Create the Rule elements for rule container
6) Simulate and Check the Rule
7) Include the Rule inside the Workflow
1) PFAC - Transaction to Create Rule

   a) Enter the Rule Name and Click Create

```
Maintain Rule

Rule: yrule_test
Name: 
```

   b) Then you will see the following screen, give the Description and select the Category

```
Rule: Create

Rule: 000000000 YRULE_TEST
Name: 
Pack: 
Applicatn Component: 

Basic data
Abbr: YRULE_TEST
Name: 

Rule definition
Category: 

[ ] Terminate If Rule Resolution Without Result
```
2) Give the Description Select the category “Agent Determination: Function to be Executed” in the rule.

**Rule: Create**

<table>
<thead>
<tr>
<th>Rule</th>
<th>00000000</th>
<th>YRULE_TEST1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td></td>
<td>Get the Approver For Travel Workflow</td>
</tr>
<tr>
<td>Pack</td>
<td></td>
<td>Application Component</td>
</tr>
</tbody>
</table>

**Basic data**

<table>
<thead>
<tr>
<th>Abbr</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
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</table>

**Rule definition**

<table>
<thead>
<tr>
<th>Category</th>
<th>Agent Determination: Function to be Executed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Function Module</td>
<td></td>
</tr>
</tbody>
</table>

**Terminate if Rule Resolution Without Result**

3) Create a Function Module to Pick the Agent

**Function module**

<table>
<thead>
<tr>
<th>Function module</th>
<th>YSURJITH_RULE</th>
</tr>
</thead>
</table>

**Attributes**

<table>
<thead>
<tr>
<th>Parameter Name</th>
<th>Typing</th>
<th>Associated Type</th>
<th>Optional</th>
<th>Short text</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACT_CONTAINER</td>
<td>LIKE</td>
<td>SIMCON</td>
<td></td>
<td>Instance Structure</td>
</tr>
<tr>
<td>ACCTOR_TAB</td>
<td>LIKE</td>
<td>SHACTOR</td>
<td></td>
<td>Rule Resolution Result</td>
</tr>
</tbody>
</table>

**Exceptions**

<table>
<thead>
<tr>
<th>Exception</th>
<th>Short text</th>
</tr>
</thead>
<tbody>
<tr>
<td>APPROVER_NOT_FOUND</td>
<td>Approver is not found</td>
</tr>
<tr>
<td>EMPNO_NOT_FOUND</td>
<td>Employee Number is not found</td>
</tr>
<tr>
<td>TRIPNO_NOT_FOUND</td>
<td>Trip Number is not Found</td>
</tr>
</tbody>
</table>
**How to Create your Own Rule in Workflow?**

```FUNCTION ysurjith_rule .

*"-------------------------------------------------------------------
*"  TABLES
*"     AC_CONTAINER STRUCTURE  SWCONT
*"     ACTOR_TAB STRUCTURE  SWHACTOR
*"  EXCEPTIONS
*"     APPROVER_NOT_FOUND
*"     EMPNO_NOT_FOUND
*"     TRIPNO_NOT_FOUND
*"-------------------------------------------------------------------

**-------------------------------------------------------------------
* Created by: P SURJITH KUMAR, Enteg Infotech, Bangalore
* Version   : 1.0
* Purpose   : Agent Resolution for Travel Workflow
**-------------------------------------------------------------------

INCLUDE <cntn01>.

DATA : lv_pernr TYPE pa0001-pernr,
       lv_reinr TYPE ftpt_req_account-reinr,
       wa_actor TYPE swactor,
       lv_kostl TYPE ftpt_req_account-kostl, " Cost Ce
       lv_verak_user TYPE csks-verak_user , " Travel
       num_lines TYPE i.

FUNCTION ysurjith_rule .

*"-------------------------------------------------------------------
*" Local Interface:
*" TABLES
*" AC_CONTAINER STRUCTURE  SWCONT
*" ACTOR_TAB STRUCTURE  SWHACTOR
*" EXCEPTIONS
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       lv_kostl TYPE ftpt_req_account-kostl, " Cost Ce
       lv_verak_user TYPE csks-verak_user , " Travel
       num_lines TYPE i.

* read Employee Number elements out of container
swc_get_element ac_container 'EMPNO' lv_pernr.
IF sy-subrc <> 0.
   RAISE empno_not_found.
ENDIF.

* read Trip Number elements out of container
swc_get_element ac_container 'TRIPNO' lv_reinr.
IF sy-subrc <> 0.
   RAISE tripno_not_found.
ENDIF.

SELECT SINGLE kostl INTO lv_kostl FROM ftpt_req_account
   WHERE pernr = lv_pernr AND reinr = lv_reinr .

IF sy-subrc = 0.

   SELECT SINGLE verak_user INTO lv_verak_user FROM csks
      WHERE kostl  = lv_kostl. " Get data based on Cost Centre

   " Get the Approver and store it in this internal Table
      wa_actor-otype = 'US'.
      wa_actor-objid = lv_verak_user.
      APPEND wa_actor TO actor_tab.

ENDIF.

* Checking the Approver found or not, if not found RAISE an Exception
DESCRIBE TABLE actor_tab LINES num_lines.
IF num_lines IS INITIAL.
   RAISE approver_not_found.
ENDIF.

ENDFUNCTION.
4) **Give Function module Name and save the Rule then the Rule number will be generated automatically.**

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<tbody>
<tr>
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<td>YSURJTH_RULE</td>
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</table>

- **Terminate If Rule Resolution Without Result**
5) Create the Rule elements for rule container
How to Create your Own Rule in Workflow?

Simulate and Check the Rule
Click the Simulation button and provide the necessary inputs and press Enter
“Click this Simulation button in the Rule a small
...
"Enter the input for the Rule and Press “ENTER” button. Then the Output is appeared as below."
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Include the Rule inside the Workflow

Give the Rule Number and generate the binding in the Workflow
How to Create your Own Rule in Workflow?

Select the “RULE” and give the Rule number as below:

![Image showing the selection of a rule with parameters and agents]

Generate the Binding and test the Workflow:

![Image showing the generation of a binding and testing the workflow]
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Save and activate the workflow then test it.
Related Content


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