**How to Integrate & Use Process Route from SAP Records Management in Your Application**

**Applies to:**
SAP Records Management 2.4 & 3.0.
For more information, visit the [Content Management homepage](#).

**Summary**
This document explains the way of integrating process route of Records Management into your application. For more detailed information on RM, please refer to the training BIT640 (generic RM), IP650 (Public Sector RM) or get in touch with SAP consultants.

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**Author Bio**
Pragya Pande has been with SAP Labs India for 4 years & has been associated with Records Management product for the same time as a developer first & now as a business expert. She has been involved in presenting the Records Management to the developer's community in India at TechEd2006 & TechEd2007.
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Introduction
This document explains the process of integrating & using process route in your application.

The document assumes rudimentary knowledge about Business workflow (workflow templates & tasks creation & modification), knowledge about SAP Records Management & process route in Records Management. The document assumes understanding of SAP systems in general & familiarity with SPRO. It is aimed at users of SAP systems with some understanding of navigation on SAPGUI screens.

Brief Overview of the Process Route Entities Relevant for Integration

The workflow path (process route) is an application independent workflow tool that supports ad hoc definition and changes of processes by end users (dynamically insert, change and delete process steps with activities and agents). It also provides deadline monitoring and logging. The workflow path has an easy-to-use user interface, because it uses only sequential and parallel steps and customized application-specific single step tasks, but no loops, conditions etc. It can be integrated with your application to provide you with the ability to provide ad-hoc workflow functionalities for working with your application objects.

This is what a process route looks like:

<table>
<thead>
<tr>
<th>Processors</th>
<th>Type</th>
<th>Activity</th>
<th>Processing Time</th>
<th>Latest End (Date)</th>
<th>Status</th>
<th>Item Number</th>
<th>Note</th>
<th>Actual Agent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Start</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>P'raja Pande</td>
<td>SAP User</td>
<td>Being Processed</td>
<td></td>
<td></td>
<td></td>
<td>00001</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parallel Steps</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>P'raja Pande</td>
<td>SAP User</td>
<td>Being Processed</td>
<td></td>
<td></td>
<td></td>
<td>00002</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lakshmi, Hema</td>
<td>SAP User</td>
<td>Information</td>
<td></td>
<td></td>
<td></td>
<td>00003</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B'leema Bachodva</td>
<td>SAP User</td>
<td>Being Processed</td>
<td></td>
<td></td>
<td></td>
<td>00004</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parallel Steps</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CHOPRAAIN</td>
<td>SAP User</td>
<td>Being Processed</td>
<td></td>
<td></td>
<td></td>
<td>00005</td>
<td></td>
<td></td>
</tr>
<tr>
<td>P'nya KURUR</td>
<td>SAP User</td>
<td>Information</td>
<td></td>
<td></td>
<td></td>
<td>00006</td>
<td></td>
<td></td>
</tr>
<tr>
<td>P'raja Pande</td>
<td>SAP User</td>
<td>Information</td>
<td></td>
<td></td>
<td></td>
<td>00007</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The process route has three workflow templates:

- **75500108**: This is the main workflow for process route. It gets triggered from the application & thus the process route starts. It is triggered by event TOBESTARTED. It waits for event TOBEFINISHED of Business Object (BO) SPATH to end. Till it is ended, it is possible to add new steps, delete & modify unexecuted steps of the process route. This will need to be copied to create your own version of main workflow.

- **75500105**: This is a sub-workflow which is started by 75500108. This workflow evaluates next steps to be executed in a branch & calls 75500106 for processing the next step. After execution of all steps in a branch, the workflow 75500106 calls 75500106 & starts evaluation of the next branch in the process route.

- **75500106**: This sub-workflow is called from 75500105 & executes a step in the process route then it calls 75500105 again to evaluate if there are further steps to be executed in that branch. If there are any further steps in that branch then 75500105 calls 75500106 again (both call each other recursively). This will need to be copied to create your own version of step workflow to execute logic for processing your application object.
• **Diagrammatical Representation:**

![Diagram](image)

Workflow Template 75500105

Workflow Template 75500106

• **Business Object SPATH:** This is the main BO for process route. One instance of this BO represents one process route. The PATHID is the unique identifier of the process route.

• **Business Object SPATHPOS:** One instance of this BO represents one step which is currently processed. It is uniquely identified by PATHID & POSID (number of the step which is being executed).

The field indicated by RED rectangle is PATHID & the field indicated by GREEN rectangle is POSID.
**Integration Scenario**

The application wants to use the functionality of process route to create ad-hoc processes to send across their own object to different processors for processing.

It should be possible to create different process routes depending on the business need. The application will use RM own process route maintenance screens or APIs for creating & working with process route & the steps. The process route needs to be triggered & ended based on the application’s defined events. The application needs to have certain activities of its own which should be executed by the processors for the application object. For e.g.:

- **DISPLAY** – for a process step assigned this activity, the processor should be able to display the object
- **EDIT** – for a process step assigned this activity, the processor should be able to open the object in edit mode
- **SIGN-OFF** – for a process step assigned this activity, the processor should be able to sign off the object
What You Need to Do to Integrate

1. Define a separate Activity area for your application’s process routes. This can be done in the maintenance view Business Segment for table SRMACTAREA.

2. Define the number range ’01’ for the area you have created in “Create Number Range Interval 01 for Process Route”:
   a. Do this in IMG->Application Server -> Basis Services ->Case Management->Customizing for Process Route in you are working in Case Management area (i.e. S_AREA_CMG)
   b. Do this in IMG->Application Server -> Basis Services ->Records Management->Customizing for Process Route in you are working in Records Management area (i.e. S_AREA_RMS)

3. Define two events( say E1 & E2) : E1 to trigger the process route & E2 to end the process route
   a. E1 should have these three exporting parameters:
      i. Handle to the Business Object (BO) for application object (say APPLBOJ)
      ii. Handle to the BO for SPATH (say EVT_OBJECT)
      iii. User who created the event (say EVT_CREATOR)
   b. E2 event should be defined with an exporting parameter which exports the user who created this event to trigger the end of the workflow (say EVT_CREATOR).

4. You can define the events either in a BO for the object or in a class (Workflow supports both).

5. Each of the activities is to be performed has to be coded:
   a. You need to create logic units which are executed when steps are executed. You can create them as methods of application BO or class for your application object.
   b. For e.g., for EDIT activity create a method & implement the functionality (which should include UI programming too if it is required by your application object) in your application BO (say method EDIT); same for DISPLAY & SIGN-OFF activities.

6. Copy 75500108 & create your own copy of the main workflow template (say T1).

7. Bind the event for triggering the workflow :
   i. Handle to the Business Object (APPLOBJ) for application object should be mapped to APPLOBJ container element
   ii. Handle to the BO for SPATH(EVT_OBJECT) should be mapped to REF_PATH container element
   iii. User who created the event(EVT_CREATOR) should be mapped to WF_INITIATOR container element
8. Then activate the event as depicted below. For e.g., in snapshot below, the workflow is currently bound & activated for triggering off by event TOBESTARTED of BOSPATH.

**Workflow Template: Display**

<table>
<thead>
<tr>
<th>Workflow template</th>
<th>T5500108</th>
<th>SRM_PATH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>Main Workflow for Process Route</td>
<td></td>
</tr>
<tr>
<td>Package</td>
<td>SRM_WF_PATH</td>
<td></td>
</tr>
<tr>
<td>Appl component</td>
<td>BC-SRM-RM</td>
<td></td>
</tr>
</tbody>
</table>

**Standard events**

<table>
<thead>
<tr>
<th>Binding</th>
<th>Object Category</th>
<th>ObjectType</th>
<th>Event</th>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>BO object type</td>
<td>SPATH</td>
<td>TOBESTARTED</td>
<td>Workflow Process Rte Stn</td>
</tr>
</tbody>
</table>

9. Bind the event for ending the workflow to step 000023(End Process Route Workflow):
   a. User who created this event to trigger the end of the workflow (EVT_CREATOR) should be bound to TERMINATOR container element.

**Workflow Builder - Display 'SRM_PATH'**

- Wait for Event
  - Container Element: SRM_PATH
  - Route Obj Reference: Process Route in Workflow
  - Event: TOBEFINISHED
  - Event Binding: Processing is to be Finished
  - Number of events: 0

10. Copy 75500106 & create your own copy of step workflow template (say T2).
11. You need to ensure that your step workflow gets called for execution of a step. Hence assign T2 to container element `SubWFPosTaskId`. For e.g. in snapshot below WS75500106 is assigned so that it gets called for step execution.

![Workflow Builder - Display 'SRM_PATH'](image)

12. You need to call the branch workflow WS75500105 from your T1 workflow. For this,
   a. You need to ensure that step 000002(Process Process Route) has the workflow template WS75500105 in the task field.

   ![Workflow Builder - Display 'SRM_PATH'](image)

   b. The workflow WS75500105 should have elements bound to provide it with information about the SPATH BO, your application object, step workflow id & the creator of workflow trigger event. As you remember, these have been assigned to some container elements from the triggering event in step 6:
      i. Application object(APPLOBJ) from T1 container should be mapped to APPLOBJ of WS75500105
ii. Path object handle(REF_PATH) from T1 container should be mapped to REF_PATH of WS75500105

iii. SubWFPosTaskId from T1 container should be mapped to REF_PATH of WS75500105

iv. Workflow creator(WF_INITIATOR) from T1 container should be mapped to WF_INITIATOR of WS75500105

13. You need to create tasks for the activities you need. These tasks can be assigned for processors who would execute the different steps of the process route. You need to ensure that your logic for processing your application object gets executed when a step gets executed. For this

a. You need to create a task (say TS1) & assign the logic unit (say EDIT method of application BO created in step 4) to it. Use the Work item text & Description in the task to provide texts relevant to your business. These texts will be visible for the workitem in the inbox:

i. If you need to process the application object in dialog (please note: method EDIT should have logic to support dialog usage) then please create a dialog Task whose interface is compatible to standard task TS48907991 (OR you can create your own standard task. Then your standard task should be assigned to field "Interfaces Compatible With" in step 0057(Display Process Route Item).
ii. If you need to process the application object in background (please note called method EDIT should have logic to support background usage) then please create a background Task whose interface is compatible to standard task TS77000358 (or you can change this & have a standard task of your own. Then your standard task needs to be assigned to field "Interfaces Compatible With" in step 0068 (Background Processing for Process Route Item).

![Workflow Builder - Display 'SRM_PATH_POS'](image)

b. You need to create an activity in customizing (say EDIT_ACT) for your application object & assign TS1 task to it in customizing. Please note that you need to specify the "Task Type" for your activity here. Please assign the task type of the task T1 you have created. The text of activity should be provided here to Activity Description. The text is displayed to the user when he selects an activity while creating a step. The activities will be for a certain Activity Area. The "Activity Area" is the area you have created in the 1st step:

i. If you are working in S_AREA_RMS then do the customizing in IMG->Application Server -> Basis Services -> Records Management -> Customizing for process route -> Create or Change Activities and Activities Functions.

![Change View "Maintain Activities": Overview](image)

ii. If you are working in S_AREA_CMG then the customizing should be in IMG->Application Server -> Basis Services -> Case Management -> Customizing for process route -> Define activities for process route.
iii. All the activities that you need should be created in the customizing.

c. These activities will be displayed in the dropdown list when you create a step in the process route.
What You Need to Do to Use Process Route from Application Productively

1. In your application logic, you need to create a process route & add steps to it.
   a. You can do this with provided UI by using function module SRM_WF_PATH_MAINTAIN or via program (in background) using methods of CL_SRM_WF_PATH.

2. Raise the event for triggering the process route in your application logic & provide the handle to the BO SPATH (you will need to create it) for the ID of the process route created by you, handle to your application object & the event creator (sy-user).

3. You can trigger the event for ending the process route in your application logic when you need to end the process route for the object. Please note that the process routes are not ended unless they are explicit ended by raising the event for ending them.
You May Want to Look at These Customizing Options Too...

1. You can create functions for activities too. For e.g., for SIGN OFF activity, you can think of several variants like APPROVED, APPROVED WITH RESERVATIONS, REJECTED etc. These can be created as functions

   a. This is available in S_AREA_RMS. Do the customizing in IMG->Application Server -> Basis Services -> Records Management -> Customizing for process route -> Create or Change Activities and Activities Functions. Create an activity & then define functions for it selecting the activity & then double-click on the Maintain Activity Functions option in the left hand side.

2. You can customize so that you can use more types of users for processing a step in process route. This needs to be done in Specify Object Types & Assign Activity Types customizing option in IMG->Application Server -> Basis Services -> Records Management -> Customizing for process route -> Specify Object Types & Assign Activity Types. Once done you will find these user types in the drop down for Agent Type when.
3. There are two BADIs available for use:

   a. BADI *Adjust Processor Determination and Search to Individual* to adapt processor
determination and processor searches to your individual requirements.

   b. BADI *Control Process Route Processing and Display* is especially for tasks of the type
Media Discontinuity. You can adapt the display of the process route to your requirements, and
specify how the data is processed after a media discontinuity.
Related Content

SAP BIT 640 training – Generic Records Management
SAP IPS650 training – Public Sector Management
RM on SAP Help:
http://help.sap.com/saphelp_nw04/helpdata/en/2b/f18ad44a77eb4faf67d1ae5aeaff2a/frameset.htm

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