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SAP NetWeaver Decision Service Management Deployment Workflow

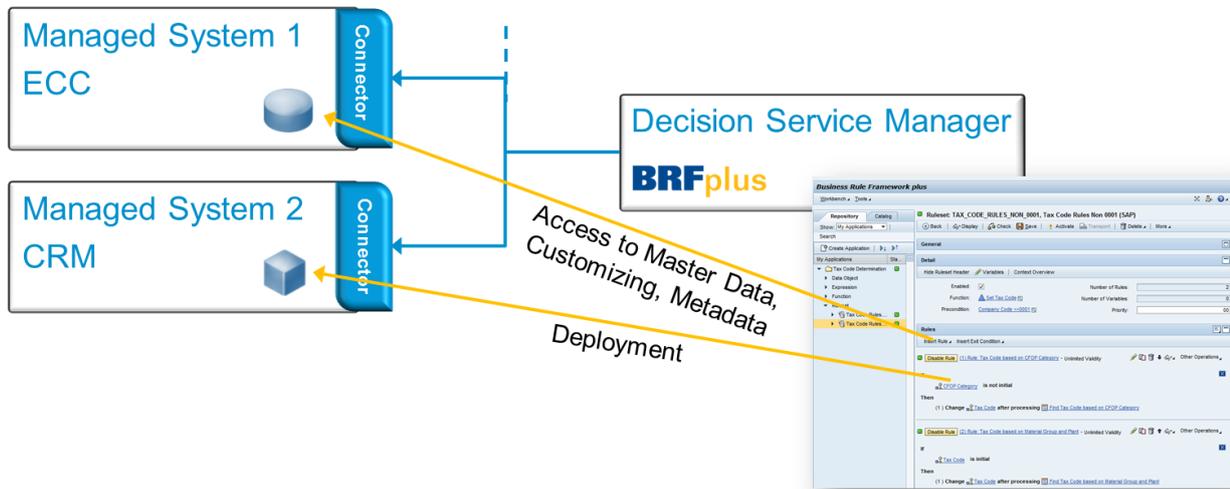
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Introduction

SAP NetWeaver Decision Service Management empowers domain experts to control decision logic without assistance from IT, simplifying and accelerating the way logic is implemented and changed across enterprise applications.



Decision Service Manager provides access to metadata, code, and values (master data, Customizing) to managed systems such as ECC or CRM for “local” modelling. From the modelled service, Decision Service Manager compiles an executable service on the managed system for local execution. The managed system does not require upgrades (or support packages); Decision Service Manager can be upgraded independently. Decision services are safe from upgrades; they are not affected when managed systems are upgraded.

Rapid change cycles are in the hand of the domain experts. SAP NetWeaver Decision Service Management offers analysing, optimizing, and implementing capabilities: service execution testing, tracing, analytics. No IT involvement is required. There is no downtime. And test deployments to any number of systems are possible. SAP NetWeaver Decision Service Management permits automated business decisions with full transparency for better decision quality.

In many cases deploying decision services to managed systems shall not be released directly, but only after some tests, approvals, or checks have been processed. So for instance for decision services from logistics a manager approval is required, while financial decision services only can be deployed after successfully running test cases. There’s a deployment workflow in place to allow for custom specific release processes. In the following we will explain how this deployment workflow works and how to set it up.

While using the deployment workflow is quite intuitive, some knowledge on SAP Workflow is required to setup such a workflow. This is a task typically performed by IT. However we provide you a step-by-step set up configuration for simple DSM workflow in this document.

Purpose

The deployment process start with the starting event triggered when user push the button in DSM “Start Deployment Process” instead of “Deploy” in DSM transaction. Instead in case immediate deployment, the workflow contains a decision step to approve or deny the rule deployment.

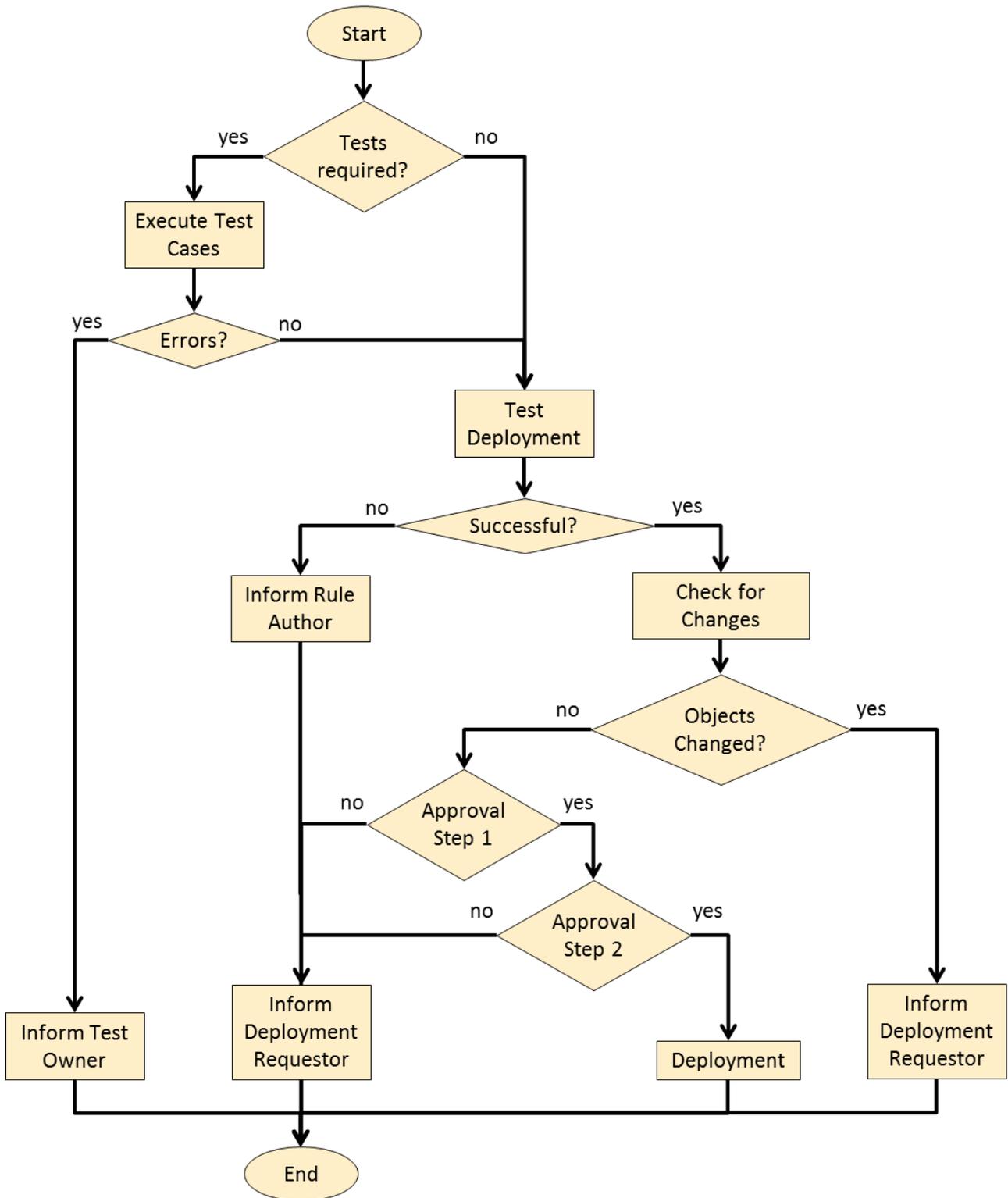
The deployment event starts the linked workflow for approval, which is defined in the SAP business workflow linkage.

Technically the event is defined in ABAP class CL_FDT_DSM_WFL and the event name is DSM_WORKFLOW_START (deployment start event).

The linkage between workflow and starting DSM deployment event defines which workflow will be started when starting deployment process. The started workflow can be both standard or customer developed.

According workflow terminology it is possible to use one-step standard workflow tasks (TS) or multi-step-workflows (WS) can contains several one-step standard tasks and complex logic.

In this template, customers can have multiple steps and can define tasks as they need. Here is an example for a workflow:



Picture 1: A possible complex DSM approval workflow example

There are example tasks for immediate use in package DECSERMG_CONTENT for simple approval steps like a manager has to approve before the next step in the workflow is executed [TS68107914 - Approval for Deployed Service], checking whether services have been changed since the process was started [TS68107916 - Have DSM Services changed], and a step doing the deployment itself [TS68107915 - Deploy Functions].

It is also possible to link a workflow to the deletion of a deployment with event DSM_DEL_WORFKLOW_START of class CL_FDT_DSM_DEL_WFL corresponding to the deployment workflow. For this use case a task for service deletion is available [TS68107917 - Delete DSM Deployment].

There are example workflow templates for simple deployment approval [WS68100003 - Workflow for DSM with Approval], simple approval with checking whether services have been changed [WS68100004 - Workflow for DSM w. Appr. and Change Check], and a deletion workflow with approval [WS68100005].

Customer enhancements or customer developed workflows by reusing standard functionalities can enable to cover customer special needs. Just an example: in some cases there can be a requirement to lock some BRFplus objects (for example decision tables) whenever there is a pending approval process for the dependent function – this functionality could be covered by custom development.

SAP Business Workflow as usual in DSM environment

Standard SAP Business workflow functionalities can be used for DSM workflows as usual (execute, accept, read back, deadline monitoring of workitems, and many other...). Substitution can be set up for example if the selected agent is out of office. Here you find some advantages and functional description of SAP Business Workflow.

Agent assignment – selection of processor of workitem

Workflow is a very powerful tool to determine agents – processor of workitems. Those agent determination rules can be set up very quickly via customizing, but it is also possible to define functionalities for very complex requirements. Based on the assigned rule the workitem is forwarded into the selected agent inbox. Only selected agents can process those workitems.

Each standard task (TS) has possible agents assigned to it during design time, who are authorized to execute the underlying business process step. The number of these agents can be restricted in the workflow step that uses the task. Using the information about the agents in the workflow step, and the possible agents for the task, the Workflow Engine determines the agent that is currently valid for the workflow step.

Standard tasks have possible agents assigned to them. In the workflow step that uses the task, you can define responsible agents. Agents who are in both groups receive the work item.

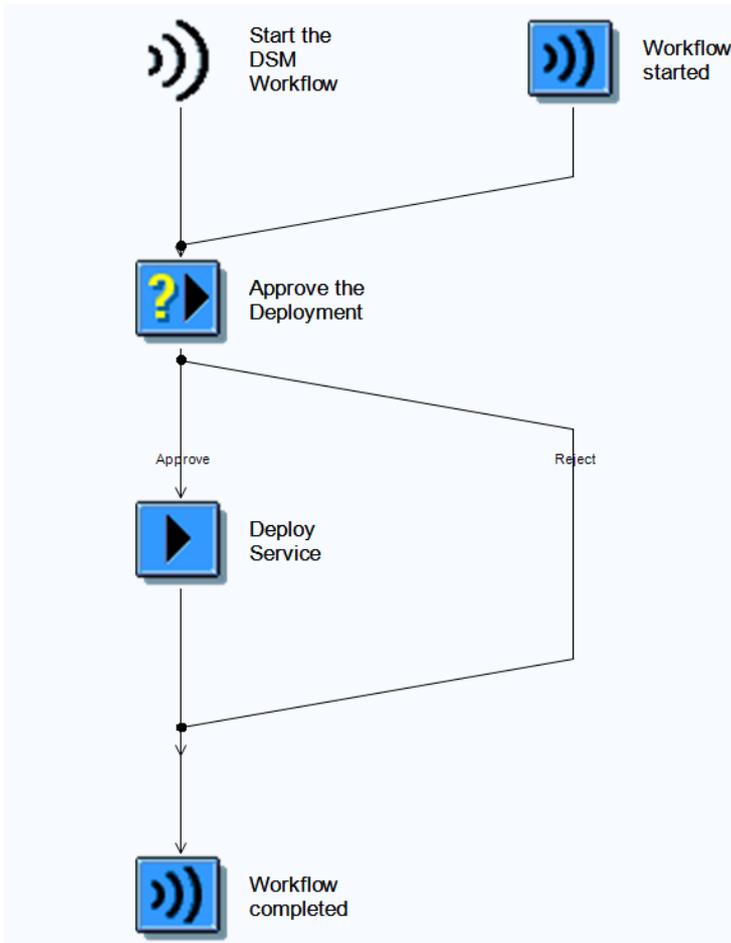
The workflow system only enters this work item once in the work item list. All recipients can view this work item by refreshing their worklist. If there is no responsible agent or possible agent, nobody receives the work item. If the task is defined as a general task, the possible agents are all users of the system. SAP therefore recommends that you define responsible agents for such tasks.

Deadline monitoring

You can use the SAP Workflow Engine to monitor deadlines for business process steps. If the deadline is missed, a subsequent workflow is started. Both simple and modelled deadline monitoring can be used. Consider functionalities like requested start, latest end, latest start and requested end.

One-step approval workflow WS68100003 as a step by step example

The simplest way to use approval workflow is the one-step approval workflow. In DSM by using the button “Start deployment process” triggers an event and starts the one-step approval workflow. The determined agents get the workitem in the workflow inbox. As previously described the selected agent will be the interception of possible and responsible agents. After denying the processed stopped, no deployment will be done. In case of approval the deployment will be processed. The workflow can be started again when the user push button “Start deployment process”



Picture 2: One-step-approval workflow

Set up of the DSM workflow WS68100003

The following chapter gives a step by step description for setting up one of the DSM approval workflows.

Prerequisite for the given scenario:

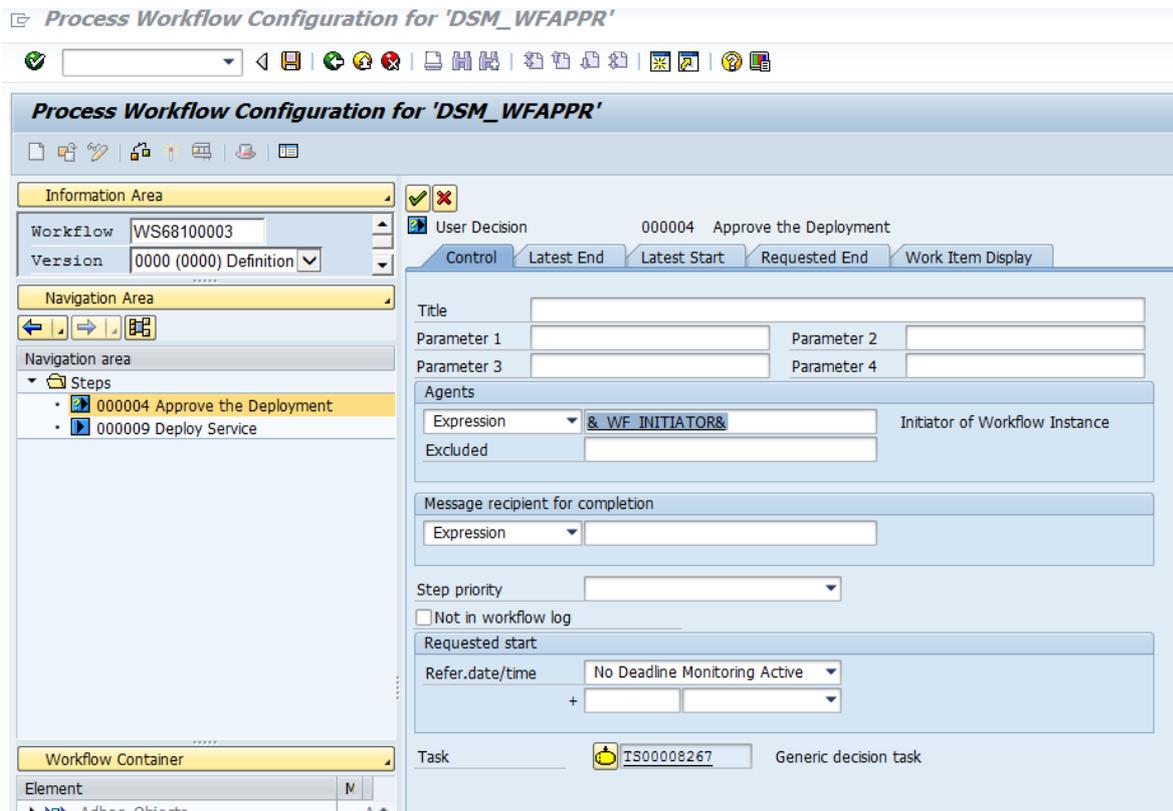
- DSM configuration is already set up – refer to DSM set up documentation
- Workflow basic customizing is done in SWU3 – automatic workflow customizing
- Some basic workflow understanding is recommended

Design time configuration

- Analysis of demo workflow and s. It is also possible to reuse the template workflow for customer needs, or to create a fully new customer workflow to fulfil your complex business needs by reusing standard workflows.
- Assign possible agents in PFTC to your standard task (for test it can be set as general task – all users as possible agents)
- Configure your agents in SWDD_CONFIG for example WS68100003.

Click on symbol of step 4, it will navigate to the details of the selected step.

In step 4 for testing purposes it is possible to add the agent “initiator”. Workflow initiator will become the user who started the workflow. In real scenario the approval can be added at this place (for example manager). Title and additional information can be filled and selected as well. After change activate the configuration.



Picture 3: Configuration of approval step

- Activate DSM event coupling in SWE2 for example for WS68100003 (Flag in Type linkage field).

Change View "Event Type Linkages": Overview

New Entries

Event Type Linkages						
Object Category	ObjectType	Event	Receiver Type	Type linka...	Enable ev...	Status
CL ABAP Class	CL_FDI_DSM_WFL	DSM_WORKFLOW_START	WS68100003	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0 No errors

- BRFplus function to be deployed is already created and activated
- For testing workflow event trace SWELS can be activated (optional)

Run-time activities

- Call transaction DSM
- Select managed system

Managed Systems

Actions	System Name	Description	RFC Destination	Partner Exit	System Type	Created On
	CD160_00_MS	00: Hands	RFC_PB8_TO_U3Y		Development System	22.08.2013,09:50:14
	CRM PRODUCTIVE SYSTEM		CRM Productive		Undefined	27.02.2013, 14:35:03
	ECC	ECC	ECC		Undefined	18.10.2012,13:09:17
	ECOMMERCE	E-commerce system	RFC_PB8_TO_PB8		Production System	04.06.2013,15:15:08
	EM6	FI-CA System EhP6	em6cint090		Demo System	25.10.2013,09:21:36

- Select Application for deployment

Deployment Applications Service Import Technical Information

Deployment Test Deploy Start Deployment Process Retrieve Open in BRFplus Workbench Open in Test Case Tool Find: Next Previous

Actions	Application / Service	Description	Deployment Timestamp	Source System Information
	▶ ZJAN_TEST			

- Select function for deployment

Result list: 2 results found

Previous Next Show All Objects Where Used

Object	Status	Type	Application
▲ TEST_FN	●	Function	ZJAN_TEST
▲ TEST_FN2	●	Function	ZJAN_TEST

- Choose button “Start Deployment Process” for selected function and choose continue
- Provide text for documentation and choose immediate deployment

Deploy Function ✕

Documentation

Deploy Demo functionality to managed system

Activation Time

Immediate Deployment
 As on Date/Time

Remark: The button “Start deployment Process” is only available, when one event coupling is active in SWE2 transaction with class CL_FDT_DSM_WFL for the event DSM_WORKFLOW_START.

Deployment																	
Deployment Test	Deploy	Start Deployment Process	Retrieve	Open in BRFplus Workbench	Open in Test Case Tool	Find:	Next	Previous									
		<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 10%;">Actions</th> <th style="width: 40%;">Application / Service</th> <th style="width: 30%;">Description</th> <th style="width: 15%;">Deployment Timestamp</th> <th style="width: 5%;">Source System Information</th> </tr> </thead> <tbody> <tr> <td></td> <td>▶ ZJAN_TEST</td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	Actions	Application / Service	Description	Deployment Timestamp	Source System Information		▶ ZJAN_TEST								
Actions	Application / Service	Description	Deployment Timestamp	Source System Information													
	▶ ZJAN_TEST																

- After starting deployment process some detailed information on started workflows are visible.

Decision Service Manager

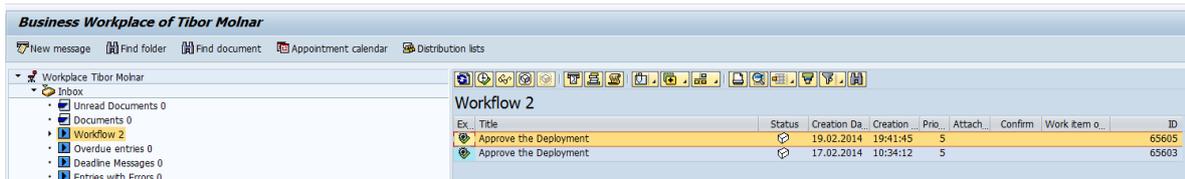
Messages (2 Messages)

- ✔ Approval workflow for service 'TEST_FN' started with workflow ID [0050569549411EE3A4E408E1C4F0CBC0](#) [\(Technical Details\)](#)
- ✔ Approval workflow for service 'TEST_FN2' started with workflow ID [0050569549411EE3A4E408E1C4F14BC0](#) [\(Technical Details\)](#)

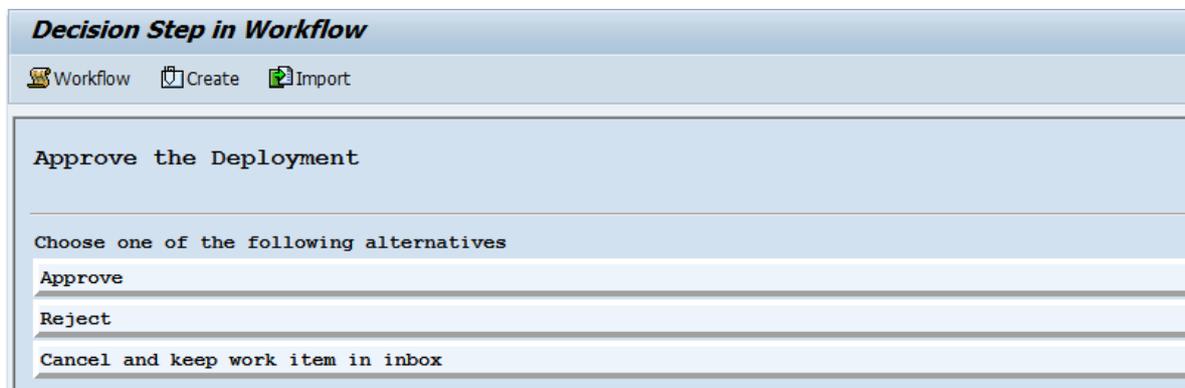
Managed Systems

Actions	System Name	Description	RFC Destination	Partner Exit	System Type
	CD160_00_MS	00: Hands	RFC_PB8_TO_U3Y		Development System
	CRM PRODUCTIVE SYSTEM		CRM Productive		Undefined
	ECC	ECC	ECC		Undefined
	ECOMMERCE	E-commerce system	RFC_PB8_TO_PB8		Production System
	EM6	FI-CA System EhP6	em6cint090		Demo System

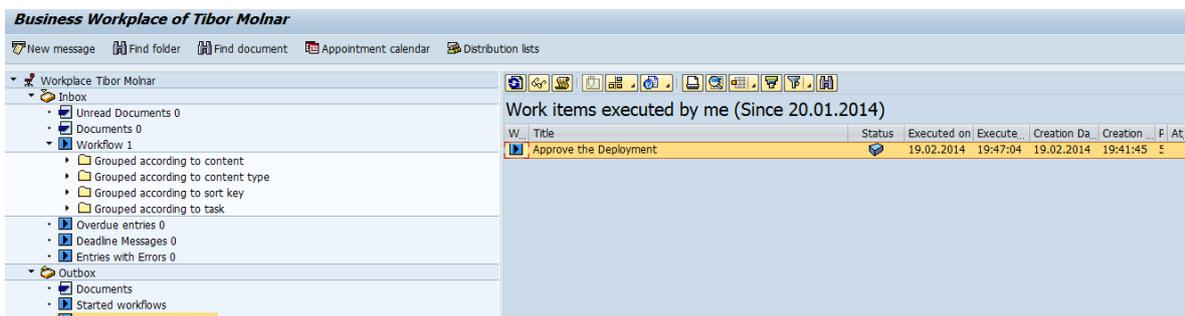
- Optional: if the event trace in transaction SWELS were activated, then it is possible to check whether the event has been started correctly and whether the workflow via triggered event has been started correctly. It is possible to jump from this view to the workitem log as well.
- In the approval (one or more determined agents) inbox the workitem is ready to be approved or rejected. Check selected approval agent inbox for workitem. Call transaction SBWP for processing workitem (approve / deny) of given deployment. You find the created workitem in SBWP under inbox – workflow.



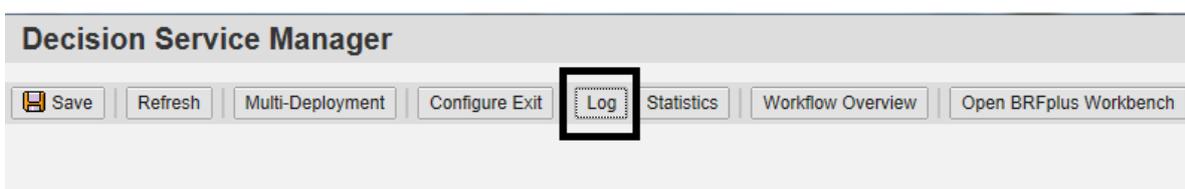
- Approve distribution (if needed attachment can be added)



- In workflow outbox in transaction SBWP under “workitems executed by me,” the processed workitem can be seen. There are several workflow logs, where the decision and other details on the deployment (graphical, technical, historical logs) can be tracked and will be logged. There are standard workflow functionalities and important as they contain historical details for example for auditing,



- Check activity log by pushing button “Log” for your function



- In activity log more information about the history can be seen

Activity Log

Log Period: Last 7 days

Maximum Number of Entries: 100

Action	Managed System	User Name	Timestamp
Deployment of 'TEST_FN' to managed system CD160_00_MS failed due to a syntax error	CD160_00_MS	WF-BATCH	19.02.2014,20:57...
Deployment of 'TEST_FN' to managed system CD160_00_MS failed due to a syntax error	CD160_00_MS	WF-BATCH	19.02.2014,19:47...

Decision Service Manager

Save Refresh Multi-Deployment Configure Exit Log Statistics Workflow Overview Open BRFPplus Workbench

Managed Systems

Actions	System Name	Description
	CD160_00_MS	00: Hands
	CRM PRODUCTIVE SYSTEM	
	ECC	ECC
	E-COMMERCE	E-commerce s
	EM6	FI-CA System

Details: CD160_00_MS, 00: Hands

Activity Log

Log Period: Last 7 days

Maximum Number of Entries: 100

Action	Managed System	User Name	Timestamp
Service 'Simple Demo 1' has been deployed to managed system ERP PRODUCTIVE 1	ERP PRODUCTIVE 1	STROESSNER	31.10.2013,08:49...
Deployment: Service 'Simple Demo' was already up to date in managed system ERP PRODUCTIVE 1	ERP PRODUCTIVE 1	STROESSNER	31.10.2013,08:48...
Service '4. Change CO Code, Cost Center/Proft Ctr in...' has been deployed to managed system ER...	ERP PRODUCTIVE 1	FECOR	31.10.2013,00:44...

- Workflow items and details can be seen by using button "Workflow Overview".

Decision Service Manager

Save Refresh Multi-Deployment Configure Exit Log Statistics **Workflow Overview** Open BRFPplus Workbench

- Open or closed workflow can be checked as well.

Workflow Overview

Refresh Close Find: Next Previous

Actions	Service	Description	Managed System	Description	ID	Type
	TEST_FN		CD160_00_MS	00: Hands	000000065602	Deployment

- Check distributed BRFPplus code in managed system

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