

Workflow Troubleshooting and Monitoring in SAP ECC 6.0



Applies to:

ECC 6.0 , Workflow Troubleshooting & Monitoring

Summary

A major advantage of workflow is the ability to monitor the workflow steps according to a predefined schedule. Deadline monitoring defines the time span with in which a job is scheduled to start 'or' terminate.

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Created on: 3rd January 2008

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Work Item Monitoring

Work items are used in the SAP Business Workflow/Web Flow to execute the individual steps of a workflow. One can use work item analysis to carry out statistical evaluations on work items.

This function can be used to select and display work items of all types according to various criteria.

The option of finding work items using the selection report is intended primarily as a tool for workflow system administrators. In particular, you can use this function for "lost" work items that do not appear in any workflow inbox or not in the expected inbox.

Transaction Code- SWI1


Selection conditions

ID



Sequence number of a work item, which is assigned automatically by the **work item manager**. If you know the ID of the work item (for example from a message), you enter it here.

Selection Using Work Item ID			
Identification	<input type="text"/>	to	<input type="text"/>
			

Type

Selection Using Work Item Properties			
Type	<input type="text" value="N"/>	to	<input type="text"/>
			

Status




Selection Using Work Item Properties			
Type	<input type="text" value="N"/>	to	<input type="text"/>
Status	<input type="text" value="COMPLETED"/>	to	<input type="text"/>
			
			

Priority


Status	<input type="text" value="COMPLETED"/>	to	<input type="text"/>
Priority	<input type="text" value="5"/>	to	<input type="text"/>
			
			

Task (ID of the task or of the workflow is represented by the work item.)

Task group (ID of **task groups** that contain the tasks and workflows for which work items are to be searched for.)

Task	TS99900390		to	<input type="text"/>	
Task Group	<input type="text"/>			<input type="text"/>	

Creation date, creation time

Selection Using Time Period					
Creation Date	28.11.2007		to	<input type="text"/>	
Creation Time	06:14:31		to	23:59:59	

Restriction of selecting work items to a pre-determined time. If you define a date window, the entries are reset at generation time. In addition to the date window, define a date window so that both entries are considered in the evaluation.

Set the *activate* indicator if the hit list is also to contain the columns **number** of the workflow definition, **version** of the workflow definition, **workflow administrator** and **executed by**.

Output Options (+Version, +Administrator)	
<input checked="" type="checkbox"/>	Switch On






Click on 'Execute' Button 

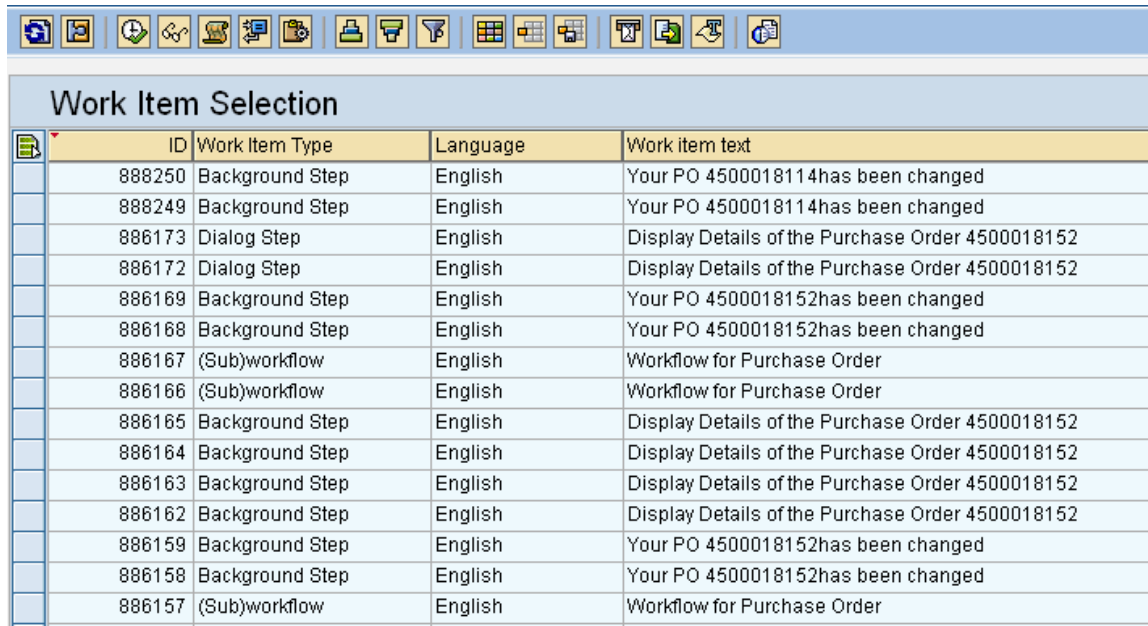
Functions on hit list entries

The selection report displays the work items found in a hit list. The **SAP List Viewer** is used to display the hit list.

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Application toolbar functions

-  **Update:** With this one updates the hit list.
- 1)  **Display work item:** With this you go to the **work item display**.
- 2)  **Display workflow log:** With this you go to the **workflow log**.
- 3)  **Display work item container:** With this you go to the **work item container**.
- 4)  **Display task:** This function takes you to the **display of the underlying task** of the work item.




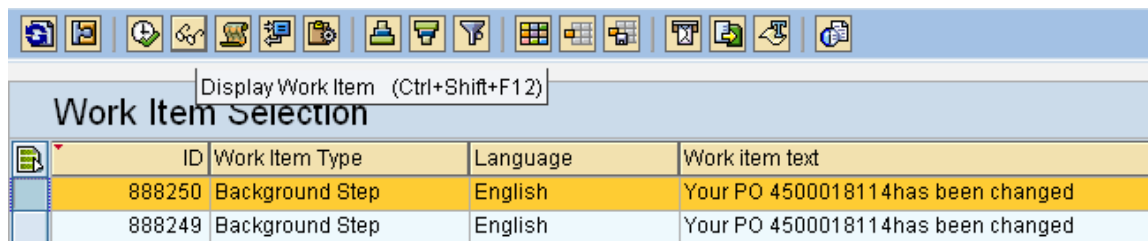
ID	Work Item Type	Language	Work item text
888250	Background Step	English	Your PO 4500018114has been changed
888249	Background Step	English	Your PO 4500018114has been changed
886173	Dialog Step	English	Display Details of the Purchase Order 4500018152
886172	Dialog Step	English	Display Details of the Purchase Order 4500018152
886169	Background Step	English	Your PO 4500018152has been changed
886168	Background Step	English	Your PO 4500018152has been changed
886167	(Sub)workflow	English	Workflow for Purchase Order
886166	(Sub)workflow	English	Workflow for Purchase Order
886165	Background Step	English	Display Details of the Purchase Order 4500018152
886164	Background Step	English	Display Details of the Purchase Order 4500018152
886163	Background Step	English	Display Details of the Purchase Order 4500018152
886162	Background Step	English	Display Details of the Purchase Order 4500018152
886159	Background Step	English	Your PO 4500018152has been changed
886158	Background Step	English	Your PO 4500018152has been changed
886157	(Sub)workflow	English	Workflow for Purchase Order

Functions accessible by double-clicking

By double-clicking on an entry in the hit list, you can go:

- To the **work item display** if the entry is not a workflow work item (type F).
- To the **workflow log** of a workflow if the entry is a workflow work item (type F).

- 1)  **Display work item:** With this you go to the **work item display**.






Display Work Item (Ctrl+Shift+F12)



ID	Work Item Type	Language	Work item text
888250	Background Step	English	Your PO 4500018114has been changed
888249	Background Step	English	Your PO 4500018114has been changed

Result: - Work Item details can be seen

Display work item

  Log  Graphic

Work item information

ID	000000888250	
Type	Background Step	
Title	Your PO 4500018114 has been changed	
Status	Completed	 Message
Priority	5 Medium	
Agent	Workflow-System	

Deadline Data






	Creation		Start		End Date	
Current	28.11.2007	13:01:36	28.11.2007	13:01:52	28.11.2007	13:02:01
Requested						
Latest						




Description








Your PO No.4500018114 has been changed

- 2)  **Display workflow log:** With this you go to the **workflow log**.

Workflow Log

 View: WF Chronicle
 View: Workflow Agents
 View: Workflow Objects

Workflow and task	Details	Graphic	Agent	Status	Result	Date	Time
Workflow for Purchase Order				In Process	Workflow started	28.11.2...	13:01:...
▶ Your PO 4500018114 has been changed				Completed	Mail sent	28.11.2...	13:02:...
▶ PO No. 4500018114 change occurred, Like t				Ready		28.11.2...	13:02:...

- 3)  **Display work item container:** With this you go to the **work item container**.

Expression	Values
▷ _Workitem	WORKINGWI:000000888250
▷ _Rule_Result	< No Instance >
▷ AddressStrings	< 1 Entry >
□ Typeld	G
▷ Receivers	< Not Set >
□ Express	< Not Set >
□ Language	< Not Set >
▷ Attachments	< Not Set >
□ LineWidth	< Not Set >
▷ _Wi_Object_ID	SELFITEM:000000888250
▼ BUS2012	FREBUS2012:4500018114
□ PurchaseOrder	4500018114
▷ MessageTypesOutbound	< Not Set >
▷ MessageTypesInbound	< Not Set >
▷ PurchasingGroup	T024:001
▷ PurchOrganization	BUS0007:0001
▷ Vendor	LFA1:0000001000
□ ReleaseGroup	
□ ReleaseStrategy	
□ ReleaseIndicator	
□ ReleaseStatus	
□ SubjectToRelease	
□ OurReference	< Not Set >
▷ ObjectType	TOJTB:FREBUS2012
▷ _RESULT	SOFM:FOL18 4 RAW32000000036060
▷ _WI_RESULT	SOFM:FOL18 4 RAW32000000036060

5) **Display task:** This function takes you to the **display of the underlying task** of the work item.

Standard task	99900389	z1 sendmail
Name	z1 sendmail	
Package	\$TMP	Applicatn Component

Basic data Description Container Triggering events Terminating

Name

Abbr.	z1 sendmail
Name	z1 sendmail
Release status	Not defined

Work Item Text

Work item text	Your PO &BUS2012.PURCHASEORDER&has been changed
----------------	-------------------------------------------------

Object method

Object Category	BOR Object Type
Object Type	SELF ITEM Wl for Self Method
Method	SENDTASKDESCRIPTION Send Description
	<input checked="" type="checkbox"/> Synchronous object method
	<input type="checkbox"/> Object method with dialog

Execution

<input checked="" type="checkbox"/> Background processing	<input type="checkbox"/> Executable with SAPforms
<input type="checkbox"/> Confirm end of processing	

Work Item Analysis

One can use work item analysis to carry out statistical evaluations on work items. The work items to be analyzed can be limited according to time, type and task.

Features


Work items per task:

Transaction Code- SWI2_FREQ

Number of work items of the specified type or for the specified tasks, which were created in the specified period. The list is sorted according to *task*.

One can select the Monitoring period by 'Radio Button'

Monitoring period

Today
 Last 7 days
 Last 30 days
 Last 365 days
 Time on 
 Interval From To


As well as 'work item type'

Work item type

Dialog
 (Sub-)Workflow
 Background

One can even go for the specific task also, if already known:

Task filter

Task  Purchase Order Details Display
 Task group (T)
 Task group (TG)
 Application Component

Now click  button.

The above action will lead to the screen where task list can be displayed as per the filtering criteria

Task	Task text	Work Item Type	Number
TS00008267	Generic decision task	Dialog Step	120
TS00008066	Edit incomplete EDL delivery note	Dialog Step	52
TS90600051	Display Order	Dialog Step	52
TS99900322	Sending Mail	Dialog Step	31
TS99900392	Material Create Task	Dialog Step	31
TS99900326	custom workflow task	Dialog Step	30
TS30000016	Approve notification of absence	Dialog Step	7
TS00008068	Inbound, error message with IDoc	Dialog Step	5
TS99900203	leave approval with single step	Dialog Step	4
TS99900247	CRequest	Dialog Step	4
TS99900393	material create task by Nihar	Dialog Step	3
TS30000017	Revise Notification of Absence	Dialog Step	2
TS70008037	Display MC document (outbound w/o IDoc)	Dialog Step	2
TS00007981	Create notification of absence	Dialog Step	1
TS00007989	Outbound, error handling with IDoc	Dialog Step	1
TS00008097	Error: Purchase order not created	Dialog Step	1
TS20000613	Purchase order change production order	Dialog Step	1
TS30000020	Error Message Without IDoc	Dialog Step	1
TS77000298	Create Calculation	Dialog Step	1
TS99900403	Purchase Order Details Display	Dialog Step	1
			350

Double-clicking on an entry in the list displays all the work items for the task in another list.

Text	Agent	Creation ...	P	Status	Wl Type
Display Details of the Purchase Order 4500018114	RMANDALO	05.12.2007	5	Completed	Dialog Step

From this list one can select  to go to the **work item display**

Display Details of the Purchase Order 4500018114

Log  Graphic

Basic data **Activities** Available objects

Display Details of the Purchase Order 4500018114

Work item attributes

Start By	Not defined
End By	Not defined
Latest End	Not defined
Forwarded by	
Priority	5 Medium 
Status	Completed
Creation Date	05.12.2007 - 11:40:58
Processed from	05.12.2007 - 11:40:58
Open requests	0

and  to go to the **workflow log**. (Seen in earlier screenshot)

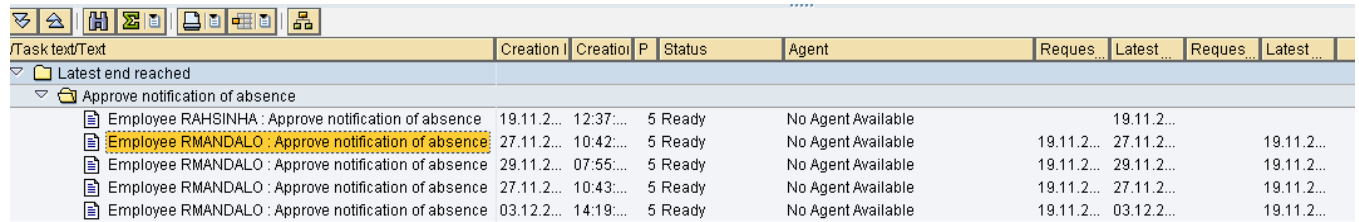
Work items with monitored deadlines:

Transaction code- SWI2_DEAD

Number of work items of the specified type or for the specified tasks, which are subject to deadline monitoring.

The initial screen is same as the screen for 'Work items per task'

The work items are displayed in an overview tree sorted according to the type of deadline monitoring and task.



Task text/Text	Creation I	Creation P	Status	Agent	Reques...	Latest ...	Reques...	Latest ...
Latest end reached								
Approve notification of absence								
Employee RAHSINHA : Approve notification of absence	19.11.2...	12:37:...	5 Ready	No Agent Available		19.11.2...		
Employee RMANDALO : Approve notification of absence	27.11.2...	10:42:...	5 Ready	No Agent Available	19.11.2...	27.11.2...		19.11.2...
Employee RMANDALO : Approve notification of absence	29.11.2...	07:55:...	5 Ready	No Agent Available	19.11.2...	29.11.2...		19.11.2...
Employee RMANDALO : Approve notification of absence	27.11.2...	10:43:...	5 Ready	No Agent Available	19.11.2...	27.11.2...		19.11.2...
Employee RMANDALO : Approve notification of absence	03.12.2...	14:19:...	5 Ready	No Agent Available	19.11.2...	03.12.2...		19.11.2...

Double-clicking on an entry displays the work item.

Employee RMANDALO : Approve notification of absence

Work item attributes

Start By	27.11.2007 - 15:17:56
End By	Not defined
Latest End	Not defined
Forwarded by	
Priority	5 Medium <input type="button" value="Save change"/>
Status	Ready
Creation Date	27.11.2007 - 15:12:56
Processed from	00.00.0000 - 00:00:00
Open requests	0

Description

Employee RMANDALO submitted a notification of absence on 27.11.2007.

Make a decision about the request.

If you reject the request, create an attachment explaining your reason for the rejection.

generous!


Work items by processing duration:

Transaction Code- SWI2-DURA

Information on the processing duration of work items of the specified type or for the specified tasks, whose processing ended in the period. The list is sorted according to *task*.

The initial screen is same as the screen for '**Work items per task**' or '**Work items with monitored deadlines**'

Provided there are appropriate work items, the current period is compared with a prior period of the same length. The variances and differences are shown.

Average values 				
Task : Create notification of absence		Type: Dialog Step		
TS00007981	Number	10% barrier	50% barrier	90% barrier
29.11.2007 - 05.12.2007	1	41s	41s	41s
22.11.2007 - 28.11.2007	1	35s	35s	35s
Change in percent	0.0	17.1	17.1	17.1

Work Load Analysis


Transaction Code: SWI5

Use

Using the workload analysis, one can establish the workload of individual organizational objects (users, positions, jobs, work centers or organizational units.)

One can go by the Responsibility 'Object Type' and 'ID'

Select Responsibility:

Type 

ID

OT	Object type text
A	Work Center
C	Job
O	Organizational unit
S	Position
US	User

Choose the appropriate 'type' from the drop down list comes as

And the 'ID' if required:

Select Responsibility:

Type	US	User
ID	IDADMIN	IDADMIN

You can look into the past ("completed since...") and into the future ("to be processed by...") in order to establish workload.

Select Type and Period of Analysis:

Type of Analysis	Completed Work Items
Date	Work Items to Be Completed

Enter Task Filter:

Now select the date on which the work load is to be analyzed

Select Type and Period of Analysis:

Type of Analysis	Completed Work Items
Date	05.12.2007

The result of the selection is displayed with the following information in the list *Completed Work Items by Agent and Task*:

- Organizational unit of the actual agent
- Agent
- Number of the task represented by the work item
- Date of final completion
- Work item text
- Processing duration

Evaluation period: 05.12.2007 to 05.12.2007

Org. unit	Agent	Task	Date	Work item text	Processing time
	RMANDALO	TS00008267	05.12.2007	PO No. 4500018114 change occured, Like to See?	5d 01h 00m 27s
	RMANDALO	TS00008267	05.12.2007	PO No. 4500018114 change occured, Like to See?	4d 23h 49m 57s
	RMANDALO	TS99900403	05.12.2007	Display Details of the Purchase Order 4500018114	10s

If you double-click on an entry, you go to the relevant work item display.

PO No. 4500018114 change occurred, Like to See?

Log Graphic

Basic data Activities Available objects

PO No. 4500018114 change occurred, Like to See?

Work item attributes

Start By	Not defined
End By	Not defined
Latest End	Not defined
Forwarded by	
Priority	1 Highest - Express
Status	Completed
Creation Date	30.11.2007 - 11:50:57
Processed from	05.12.2007 - 11:41:37
Open requests	0

Formatting for statistical purposes

The information can be formatted for statistical purposes.

To do this, position the cursor on one of the columns *Org. unit*, *Agent*, *Task* or *Date*, and select the function *Statistics*.

Evaluation period: 28.11.2007 to 05.12.2007

Agent	Number	10% barrier	50% barrier	90% barrier
ATOULEMO	1	1d 21h 05m 11s	1d 21h 05m 11s	1d 21h 05m 11s
CHAKRABORTY	21	7s	1m 06s	4m 10s
DIPAUL	3	8s	11s	1m 58s
LANDERSS	1	1d 14h 37m 41s	1d 14h 37m 41s	1d 14h 37m 41s
MPADHYE	1	2m 12s	2m 12s	2m 12s
RAHSINHA	4	22s	27s	46s
RMANDALO	14	12s	1m 44s	4d 16h 44m 43s
RVELPULA	2	2h 33m 09s	12h 24m 59s	22h 16m 49s
SISAMAL	8	59s	1m 49s	26m 25s
SRANJAN	1	3m 04s	3m 04s	3m 04s
SSTIEGMA	3	2m 00s	2m 27s	4m 04s
THIENPONT	1	23h 28m 11s	23h 28m 11s	23h 28m 11s

Depending on the column you selected, the following information is displayed:

- *Organizational unit* and *number* of work items completed by an employee from the organizational unit.
- *Agent* and *number* of work items completed by this agent.
- *Task* and *number* of work items for this task, which were completed.
- *Date* and *number* of work items completed on this date.

Workflow Event Trace

Use

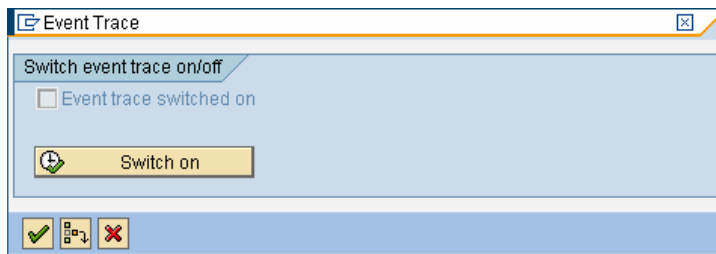
All events created correctly are logged in the event trace **irrespective** of whether potential receivers exist. If a receiver is entered in the event trace, it does not necessarily mean that this receiver was called *successfully*.

Prerequisites

The event trace is only written if it has been activated.

To do so use Transaction Code: - **SWELS**

Click on 'Switch on' Button



Displaying the event trace

The event trace display can also be restricted using a selection screen.

To display Event Trace, use the transaction code: - **SWEL**

Features

The following data is logged in the event trace:

Event data

- Triggering object type, triggering object
- Event ID
- Triggering program
- Trigger date and time

For example put **Creator (User)** and **Created From date /Time**

Event Data			
Event ID	<input type="text"/>	to	<input type="text"/>
'Creator' object type	<input type="text"/>	to	<input type="text"/>
'Creator' object instance	<input type="text"/>	to	<input type="text"/>
Event	<input type="text"/>	to	<input type="text"/>
Program creating event	<input type="text"/>	to	<input type="text"/>
Creator (User)	<input type="text" value="IDADMIN"/>	to	<input type="text"/>
Created From Date/Time	<input type="text" value="28.11.2007"/>	/	<input type="text" value="15:36:41"/>
Created Until Date/Time	<input type="text"/>	/	<input type="text" value="00:00:00"/>

Receiver data

- Receiver function module
- Receiver type
- Receiver instance
- Linkage status

Receiver Data			
Receiver Type	<input type="text"/>	to	<input type="text"/>
Receiver Instance	<input type="text"/>	to	<input type="text"/>
Receiver FM	<input type="text"/>	to	<input type="text"/>
Receiver Type FM	<input type="text"/>	to	<input type="text"/>
Check FM	<input type="text"/>	to	<input type="text"/>

Receiver Linkage


Event Receiver Linkages	
<input checked="" type="radio"/>	With and without linkages
<input type="radio"/>	Only events without linkages
<input type="radio"/>	Only events with linkages

In addition to the criteria for event data, receiver data and event receiver linkage data, the display can also be restricted to linkages with errors.

Error Status








Error Status


Only linkages with errors

Now Click on  Button


We can now details of the Event along with Object type, Receiver Type, Information etc.

Display Event Trace

Object Type	Event	Current Date	Time	Name of Receiver Type	Information	Handler/Action
QCYBUS2012	CREATED	28.11.2007	18:22:24			No receiver entered
BUS2011	QUOTATIONCREATED	28.11.2007	18:22:24			No receiver entered
BUS2012	 RELEASESTEP_CREATED	28.11.2007	18:22:25	WS20000075		SWWW_WI_CREATE_VIA_EVENT
		28.11.2007	18:23:01			Feedback after error
		28.11.2007	18:23:01			Event put in queue
		28.11.2007	18:22:25	WS99900249		SWWW_WI_CREATE_VIA_EVENT_IBF

Now selecting a particular Event, click on  button or 'Double click' the Event to see the details at Event Data, Receiver Data and Trace Data

Event Data

Event Data			
Event Instance ID	1613460		
Object Type		BUS2012	
Object Key	4500018201		
Event	RELEASESTEP_CREATED		
Event Creator	US_RANIK3		
Creation Time	06.12.2007	13:36:18	INDIA

Receiver Data

Receiver Data	
Receiver Type	WS20000075
Object Key	
Receiver FM	SWWW_WI_CREATE_VIA_EVENT
RFC Destination	WORKFLOW_LOCAL_800
Check FM	
Receiver Type FM	

Trace Data

Trace Data			
Trace Date/Time	06.12.2007	13:36:19	INDIA
User Name	RANIK3		
Main Program	RSM13000		
Action	Receiver started correctly		

Workflows for Object

Transaction code: **SWI6**.

- This report shows all workflow instances linked to a particular object instance.
- Example: Particular Purchase Order

Display Workflows: Select an Object

Object Type Category	<input type="text" value="BOR Object Type"/>
Object Type	<input type="text" value=""/>
Key	<input style="width: 100%;" type="text"/>
	<input type="button" value="Enter Object Key"/>
Selection variant	<input type="text" value="Active Instances (Running, Ready, Committed,...)"/>
Task	<input type="text"/>
Task group	<input type="text"/>
Component	<input type="text"/>
Selection Period	<input type="text" value="Last 7 days"/>

Workflows for Object type

- **Transaction code: SWI14**
 - This report shows all the work items and workflow instances for all object instances of a business object type.
 - Example: Workflows related to all Purchase Orders

Display Workflows: Please Select an Object Type

Object Type Category	<input type="text" value="BOR Object Type"/>
Object Type	<input type="text" value=""/>
Selection variant	<input type="text" value="Active Instances (Running, Ready, Committed,...)"/>
Task	<input type="text"/>
Task group	<input type="text"/>
Component	<input type="text"/>
Selection Period	<input type="text" value="Last 7 days"/>

Workflow Diagnostic Tool

- **Transaction Code: SWUD**
 - A primary diagnostic tool.
 - Analyze workflow definition.
 - Following are the options available:
 - Verify workflow customizing
 - Perform Workflow Customizing
 - Problem: Task does not start
 - To track down the exact cause of an error
 - Problem: Workflow is hanging

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