Tips and Tricks for Workflow Administration

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Session ID 82919

About the speakers

Susan Keohan

- SAP Workflow Specialist
- You won't believe I've been working with SAP for 24 years

Martin Maguth

- Managing Partner at MaxECM Solutions LLC and long-time ASUG Volunteer
- Fun fact: Workflow Hacker

Agenda

1. Basis and Runtime customizing
2. Workflow diagnosis
3. Workflow Reports
4. Event and traces
5. Real Life advice

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Key Outcomes/Objectives

- The most important tasks of a workflow administrator
- Key reports available for SAP Workflow reporting
- How to troubleshoot and diagnose errors

What is a Workflow Administrator anyway?

Running SAP workflows
without a Workflow Administrator
is like
running SAP
without a Basis team

- ***Unknown Workflow Administrator***

Introduction

Your Workflow Administrator

- Makes sure that your workflow development and runtime environment are properly configured and maintained on an ongoing basis
- Coordinates workflow development and enhancements
- Is the point of contact for your users when workflows are not behaving as expected
- Communicates issues to the basis and/or ABAP team if changes in SAP are necessary

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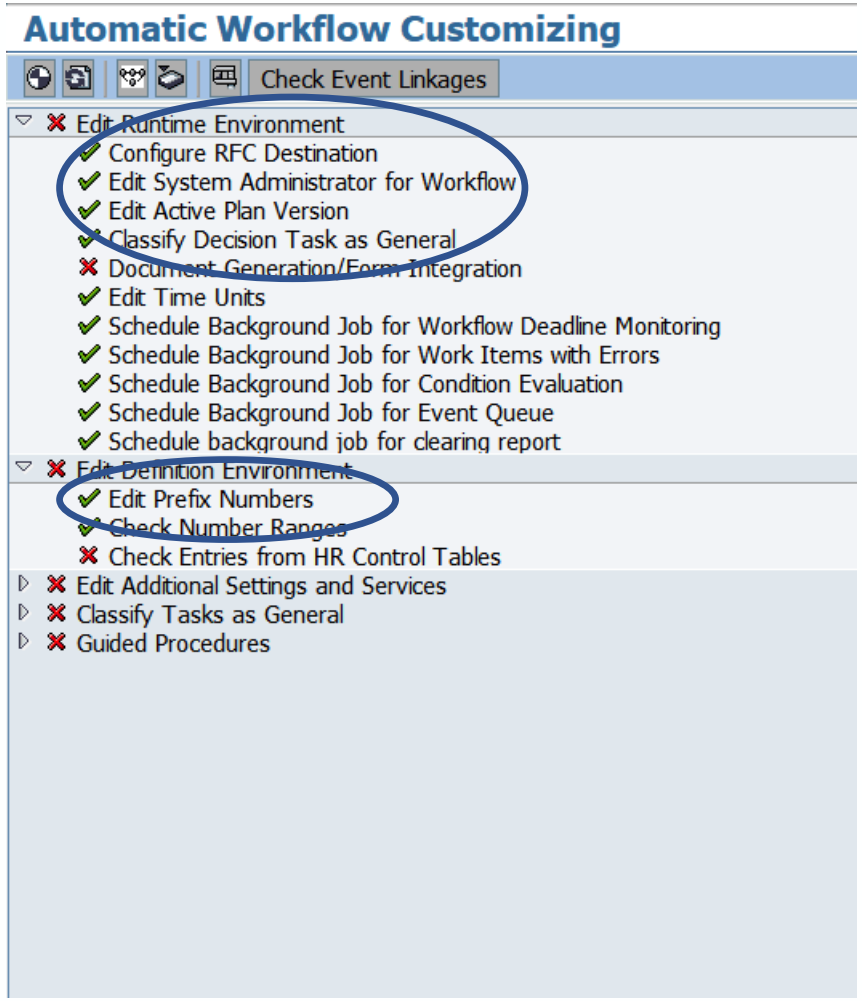
Basis Customizing (TX SWU3)



No exceptions!
Must be complete

Fun Fact: Edit System Workflow Administrator will identify you (or someone else) as the recipient of Workflow error messages

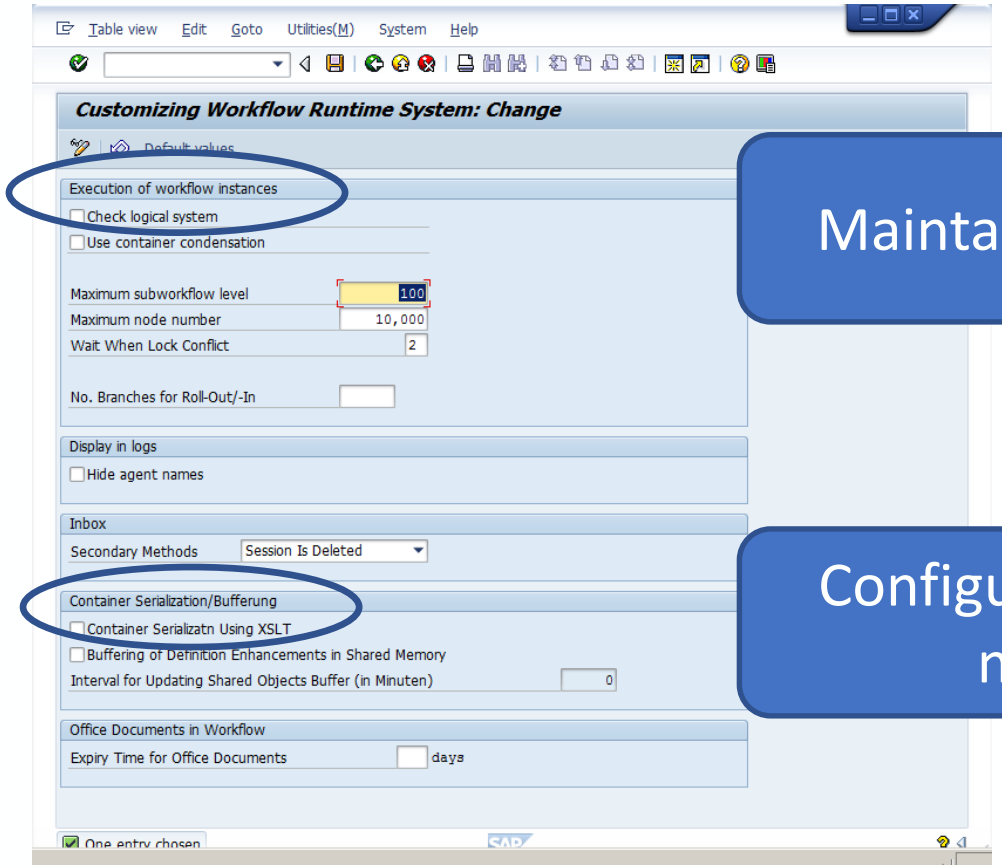
Basis Customizing

- Workflow basis customizing is necessary to configure the SAP workflow engine and its definition and runtime environment
- Use transaction SWU3 to access basis customizing
- Basis customizing is generally a one time setup task
- **MUST** be completed **BEFORE** you start developing and running workflows in your SAP system

Runtime Configuration (TX SWPA)

- Workflow runtime should be configured to ensure best possible workflow performance
- Use transaction SWPA to access basis customizing
- Runtime customizing is also generally a one time setup task and manages system data volume and size, template levels, buffering, etc.

Runtime Configuration



Maintain data limits

Configure buffers, if needed

In general, the defaults you see here are sufficient. If you start to see performance issues, it's worth revisiting this transaction.

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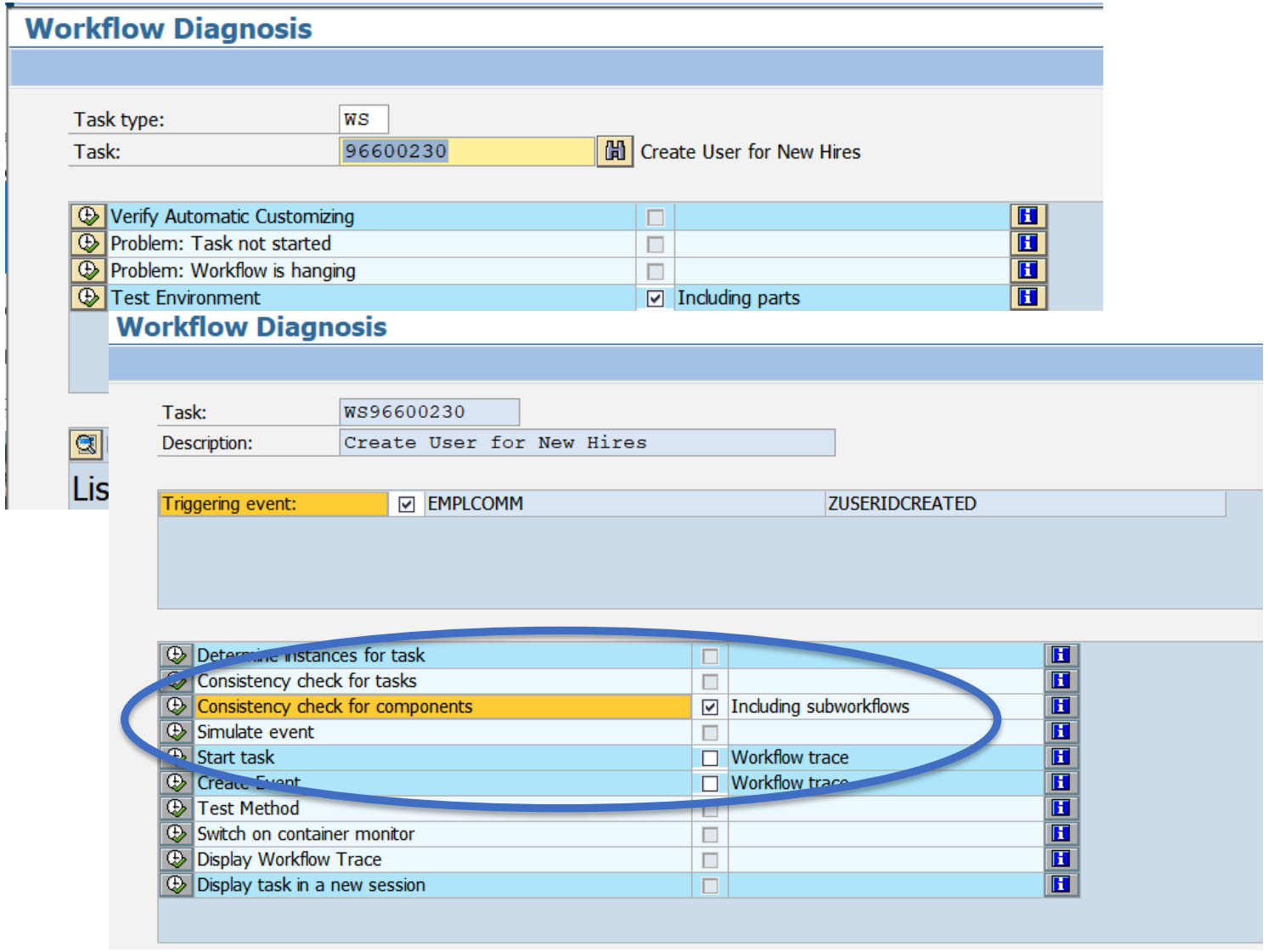
Workflow Diagnosis

- Workflow diagnosis allows you to run most diagnosis and setup steps from one screen for a workflow template
- Use transaction SWUD to access workflow diagnosis
- Transaction allows you to execute troubleshooting for a template based on certain symptoms, e.g. workflow is hanging or not started
- Should be run before a workflow template is activated in SAP production and monitored on an ongoing basis for frequently used workflow templates to detect issues early

Workflow Diagnosis - SWUD



Perform specific troubleshooting steps for a template.
Use this when a new WF Template goes to Prod!

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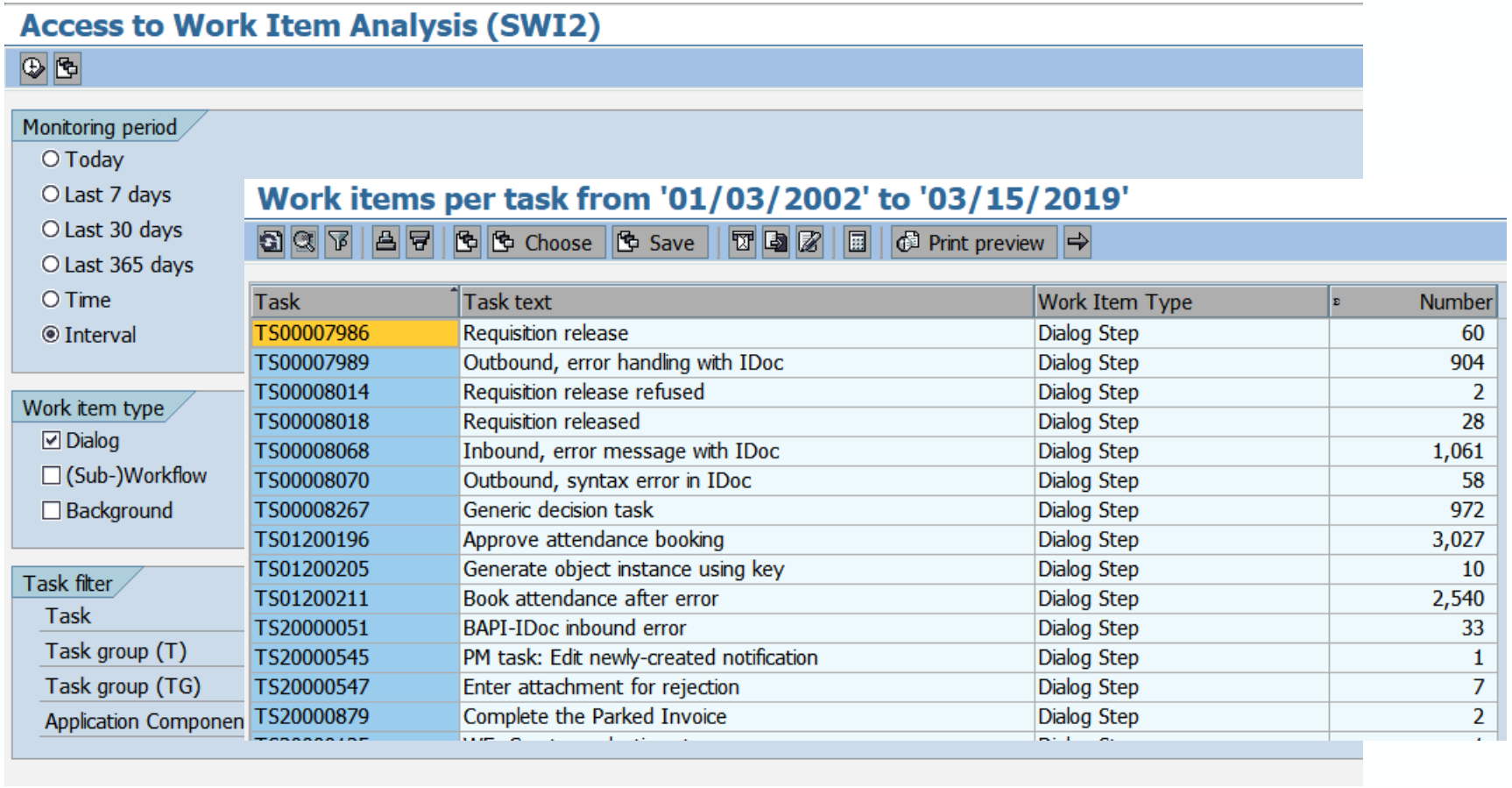
Workflow Reports

- SWI2_FREQ Work Items per Task
- SWI1 or SWIA more granular, with more Admin options
- SWI2_DIAG Workflows with Errors
- SWI2_ADM1 Work Items Without Agents
- SWI2_ADM2 Work Items with Deleted Users

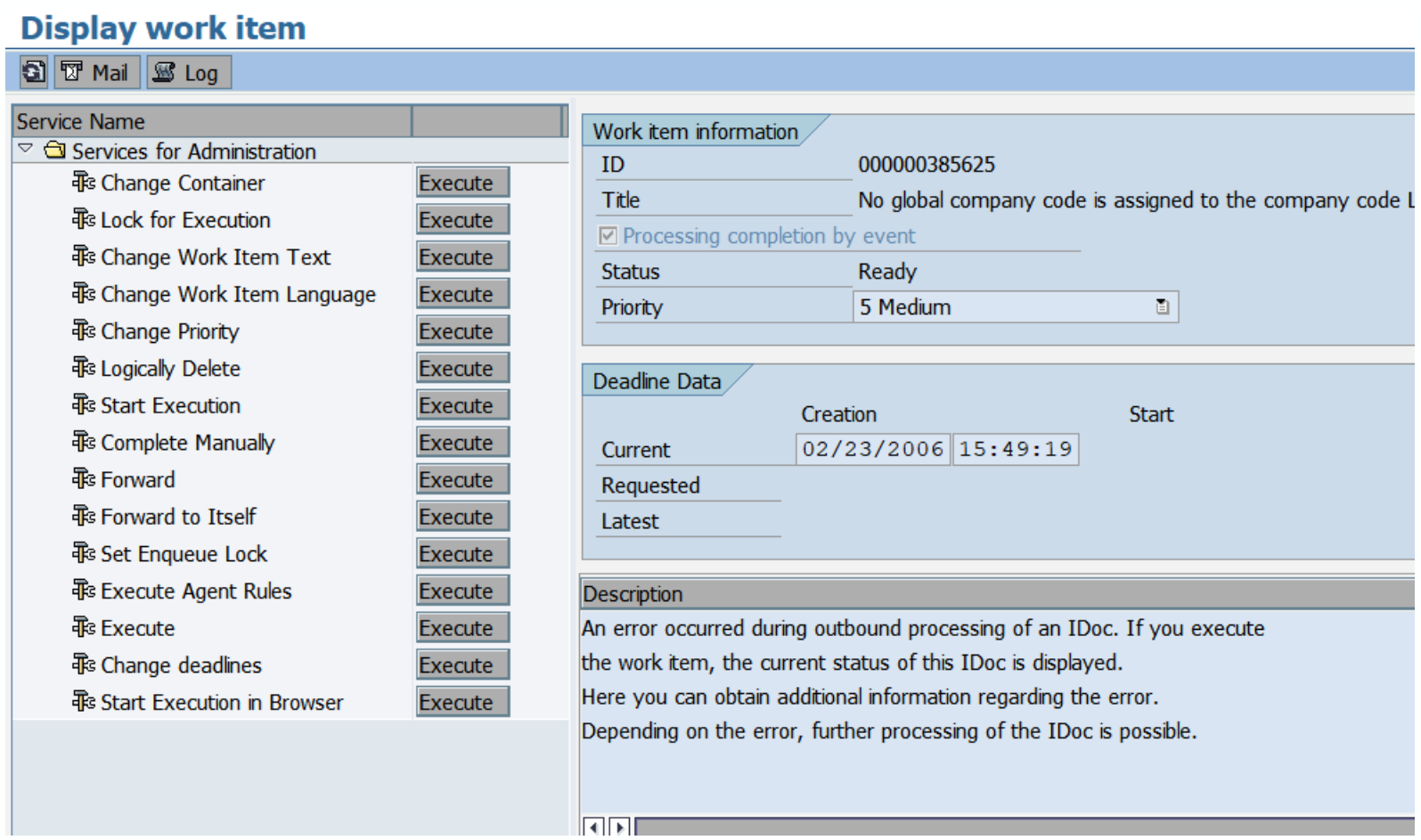
SWI2_FREQ



Task	Task text	Work Item Type	Number
TS00007986	Requisition release	Dialog Step	60
TS00007989	Outbound, error handling with IDoc	Dialog Step	904
TS00008014	Requisition release refused	Dialog Step	2
TS00008018	Requisition released	Dialog Step	28
TS00008068	Inbound, error message with IDoc	Dialog Step	1,061
TS00008070	Outbound, syntax error in IDoc	Dialog Step	58
TS00008267	Generic decision task	Dialog Step	972
TS01200196	Approve attendance booking	Dialog Step	3,027
TS01200205	Generate object instance using key	Dialog Step	10
TS01200211	Book attendance after error	Dialog Step	2,540
TS20000051	BAPI-IDoc inbound error	Dialog Step	33
TS20000545	PM task: Edit newly-created notification	Dialog Step	1
TS20000547	Enter attachment for rejection	Dialog Step	7
TS20000879	Complete the Parked Invoice	Dialog Step	2

No matter which way you use to get there, you'll end up looking at the WF Log

SWI2_FREQ



From the Workflow reports, you can perform many administrative actions

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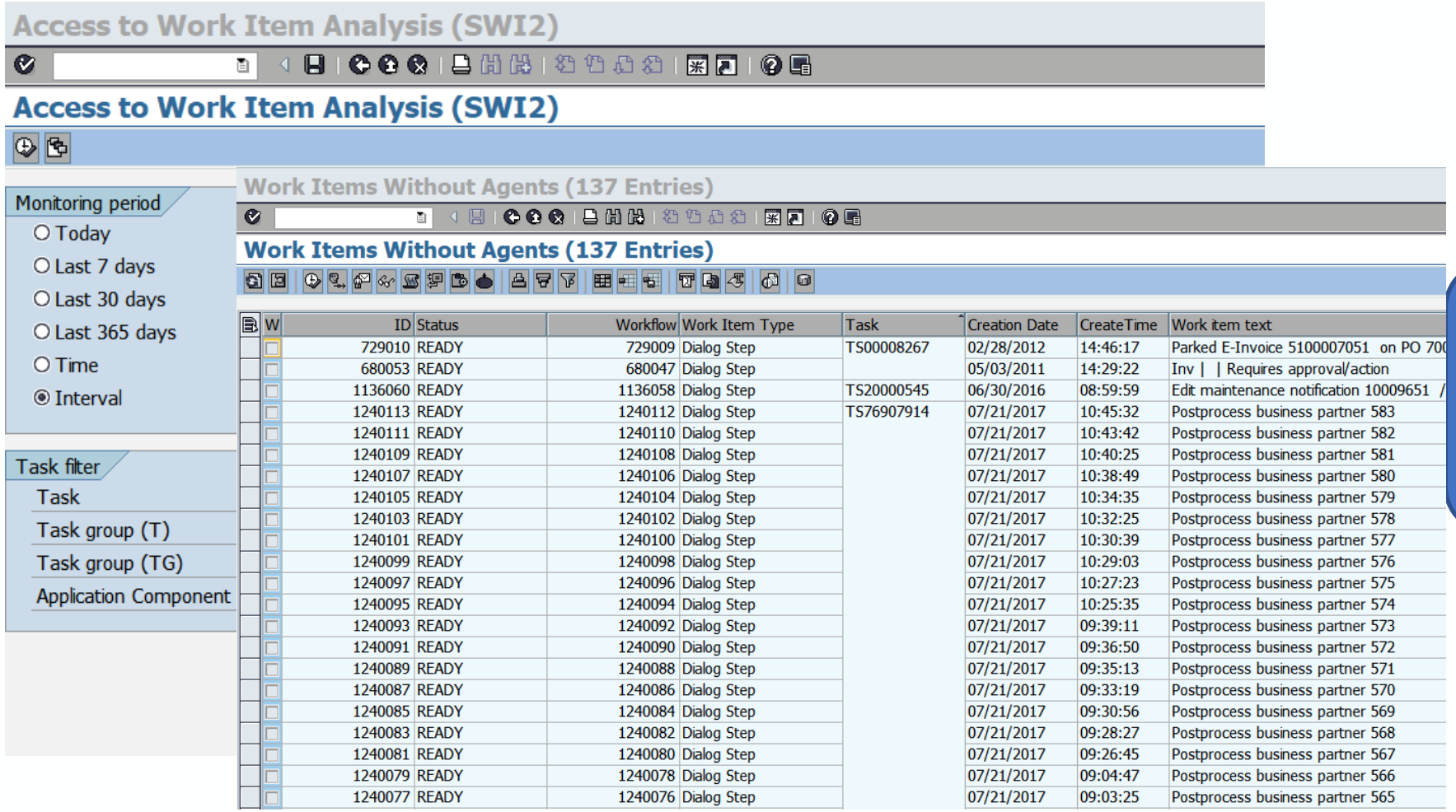
Workitems without users (TX SWI2_ADM1



W	ID	Status	Workflow	Work Item Type	Task	Creation Date	CreateTime	Work item text
	729010	READY	729009	Dialog Step	TS00008267	02/28/2012	14:46:17	Parked E-Invoice 5100007051 on PO 700
	680053	READY	680047	Dialog Step		05/03/2011	14:29:22	Inv | | Requires approval/action
	1136060	READY	1136058	Dialog Step	TS20000545	06/30/2016	08:59:59	Edit maintenance notification 10009651 /
	1240113	READY	1240112	Dialog Step	TS76907914	07/21/2017	10:45:32	Postprocess business partner 583
	1240111	READY	1240110	Dialog Step		07/21/2017	10:43:42	Postprocess business partner 582
	1240109	READY	1240108	Dialog Step		07/21/2017	10:40:25	Postprocess business partner 581
	1240107	READY	1240106	Dialog Step		07/21/2017	10:38:49	Postprocess business partner 580
	1240105	READY	1240104	Dialog Step		07/21/2017	10:34:35	Postprocess business partner 579
	1240103	READY	1240102	Dialog Step		07/21/2017	10:32:25	Postprocess business partner 578
	1240101	READY	1240100	Dialog Step		07/21/2017	10:30:39	Postprocess business partner 577
	1240099	READY	1240098	Dialog Step		07/21/2017	10:29:03	Postprocess business partner 576
	1240097	READY	1240096	Dialog Step		07/21/2017	10:27:23	Postprocess business partner 575
	1240095	READY	1240094	Dialog Step		07/21/2017	10:25:35	Postprocess business partner 574
	1240093	READY	1240092	Dialog Step		07/21/2017	09:39:11	Postprocess business partner 573
	1240091	READY	1240090	Dialog Step		07/21/2017	09:36:50	Postprocess business partner 572
	1240089	READY	1240088	Dialog Step		07/21/2017	09:35:13	Postprocess business partner 571
	1240087	READY	1240086	Dialog Step		07/21/2017	09:33:19	Postprocess business partner 570
	1240085	READY	1240084	Dialog Step		07/21/2017	09:30:56	Postprocess business partner 569
	1240083	READY	1240082	Dialog Step		07/21/2017	09:28:27	Postprocess business partner 568
	1240081	READY	1240080	Dialog Step		07/21/2017	09:26:45	Postprocess business partner 567
	1240079	READY	1240078	Dialog Step		07/21/2017	09:04:47	Postprocess business partner 566
	1240077	READY	1240076	Dialog Step		07/21/2017	09:03:25	Postprocess business partner 565

Select step and perform user determination, forward, etc.

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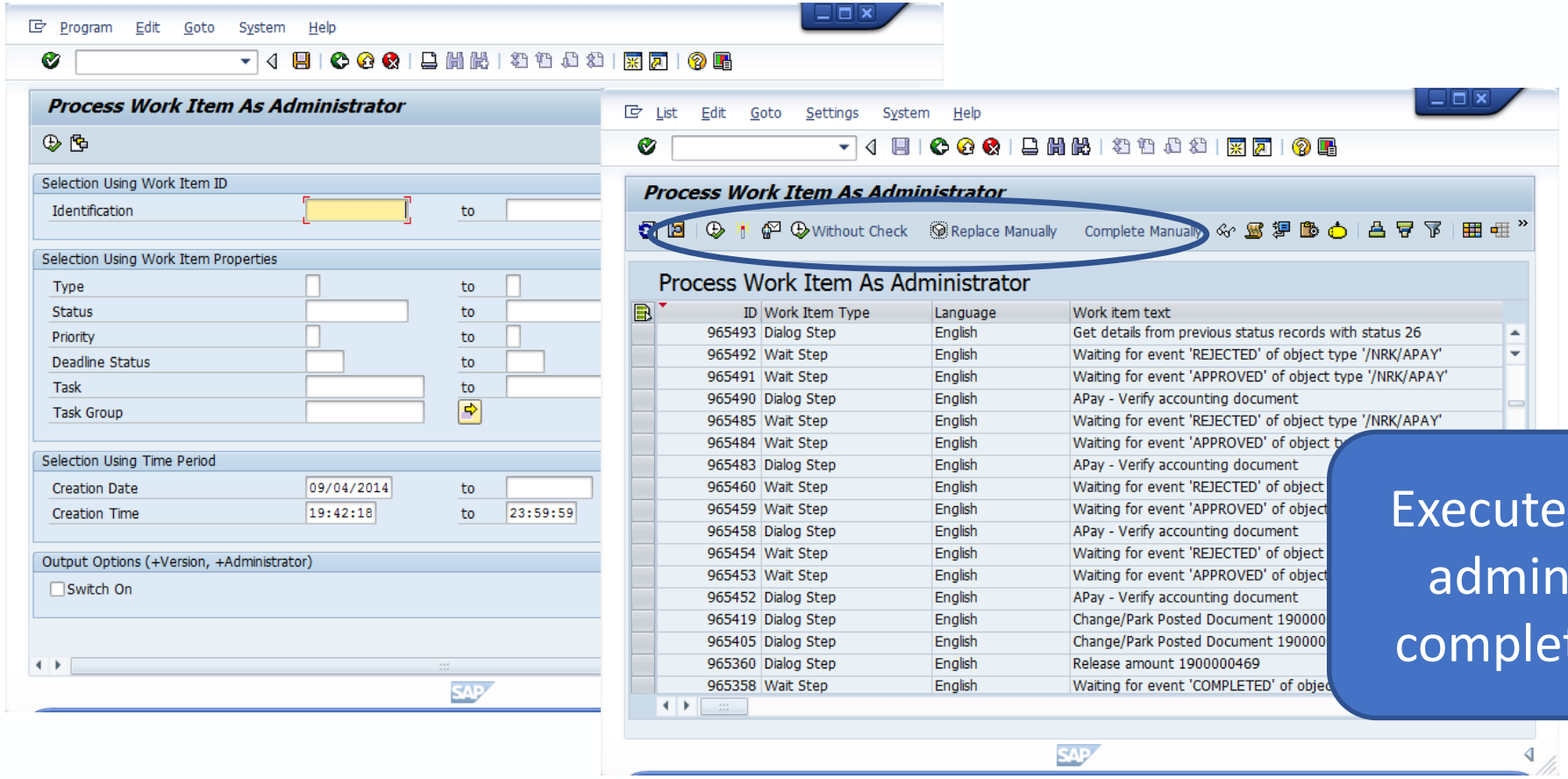
“Just do it”– Execute items without check

- Workflows can get “stuck” when no agent can be determined or when the selected agent is not available to execute the item
- Use transaction SWIA to access and execute the work items without agent check
- This transaction can be used by administrators to continue with a workflow that has been put on hold and cannot continue; the administrator can access and execute a work item even if he/she is not the selected agent for the step

“Just do it”– Execute items without check (TX SWIA)



Execute items as an administrator or complete manually

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Event Trace – What's going on?

https://www.youtube.com/watch?v=H-kA3UtBj4M

“What’s going on?” – Event trace

- If a task or template is supposed to be triggered or terminated by an event, the failure of the event will result in incorrect or no processing of the task
- This can be a result of the event not being raised or a failure in the event processing, such as bindings, check functions, incorrect linkage, etc
- The event trace is a technical tool that gives you details about the processing of the event, publishing, and receivers

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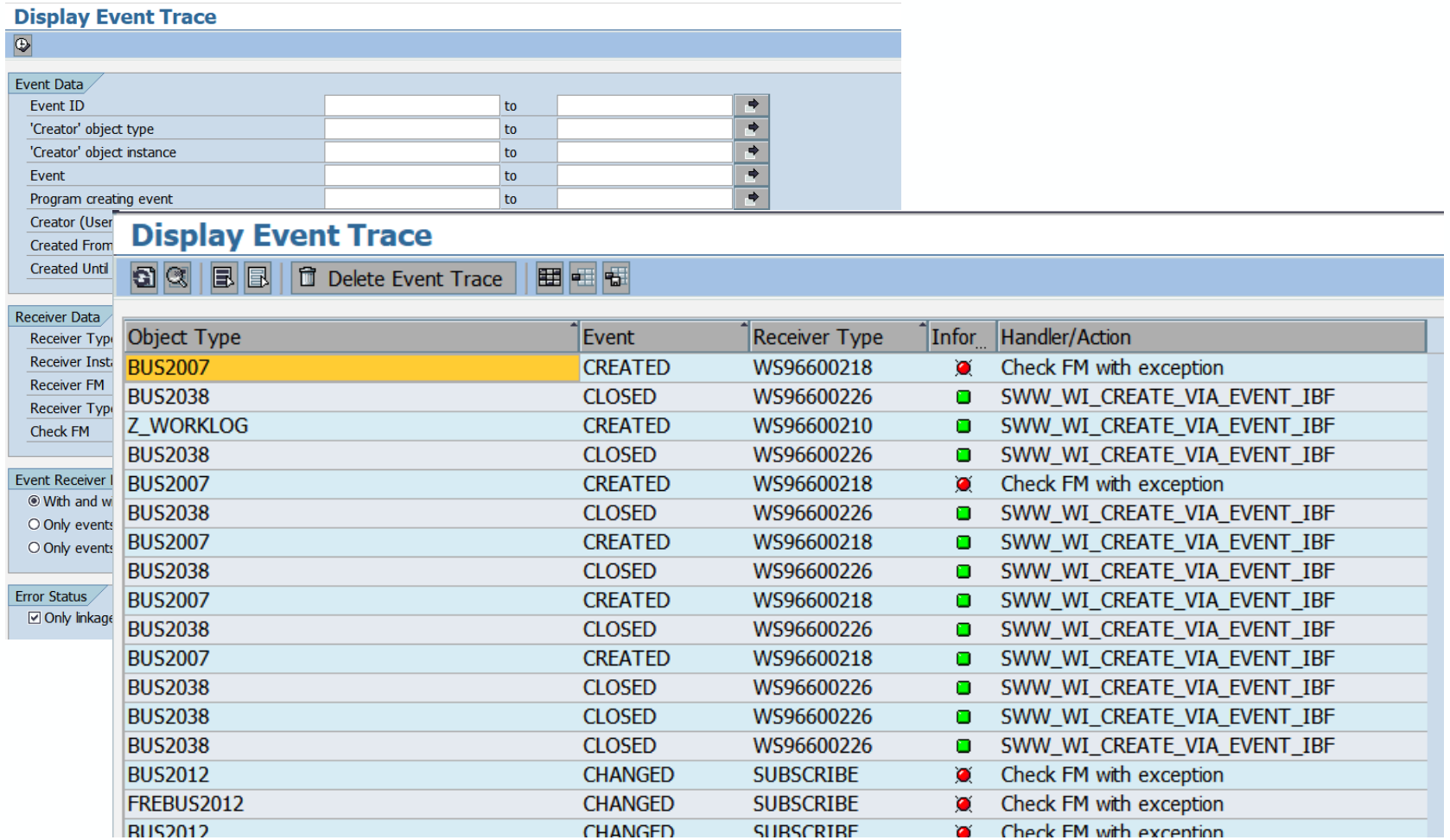
Event Trace: What's going on?

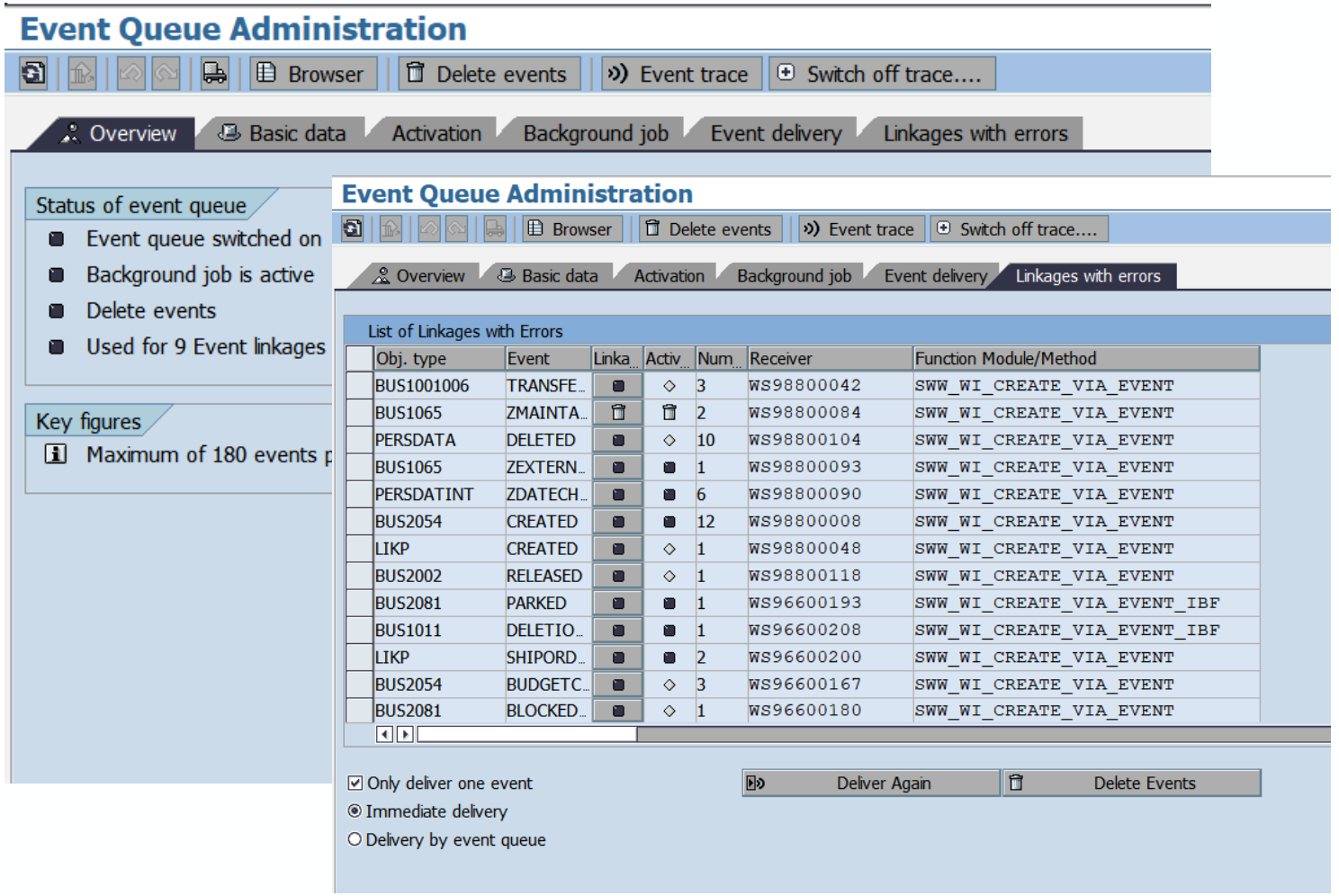
- Use transaction SWELS to start and stop the event trace
- Use transaction SWEL to access the event trace
- Remember to **turn on the trace only when needed** and to turn it off after usage
- Use SWEQADM to access event queue, if active

“What’s going on?” – Event trace



Drill into the event log for more details

“What’s going on?” – SWEQADM



You have the ability to re-deliver any events stored in the event queue

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Real life advice

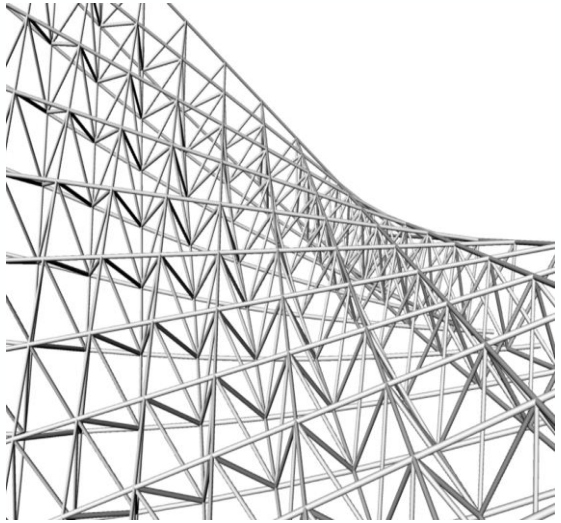
- Spending time getting to know the Workflows in the development process will be invaluable
- The majority of issues will be with Agent Determination (make sure your WF Developer uses ‘Terminate if no agent found’ or some such logic

Scenario 1 - Where's my approval

- Whenever possible, get the document/object/cart number!
- Run your favorite WF report – Drill in to see multiple instances of the WF, identify the one in question
- Someone may have reserved the task (or already executed it)
- WF has not yet reached their level of approval
- *Check to see if user is logged on to the correct system, because, hey, it happens*

Scenario 1 - Where's my approval

- … Here's where your in depth knowledge of HOW a workflow finds an approver will come in handy. You may need to know about Agent Resolution, HR Org structures, Rules and Responsibilities.



Scenario 2 - Why did or So-and-So get this?

- You can view what is in a user's inbox with transaction SWI5
  - Was it forwarded to them?
- Check Substitutions (table HRUS_D2)
  - Are they a substitute for the actual agent?

Scenario 3 – It's dead, Jim

A user may call and say 'The workflow for XXX isn't flowing"

SWI2_DIAG will show you any workflows that have gone into error.

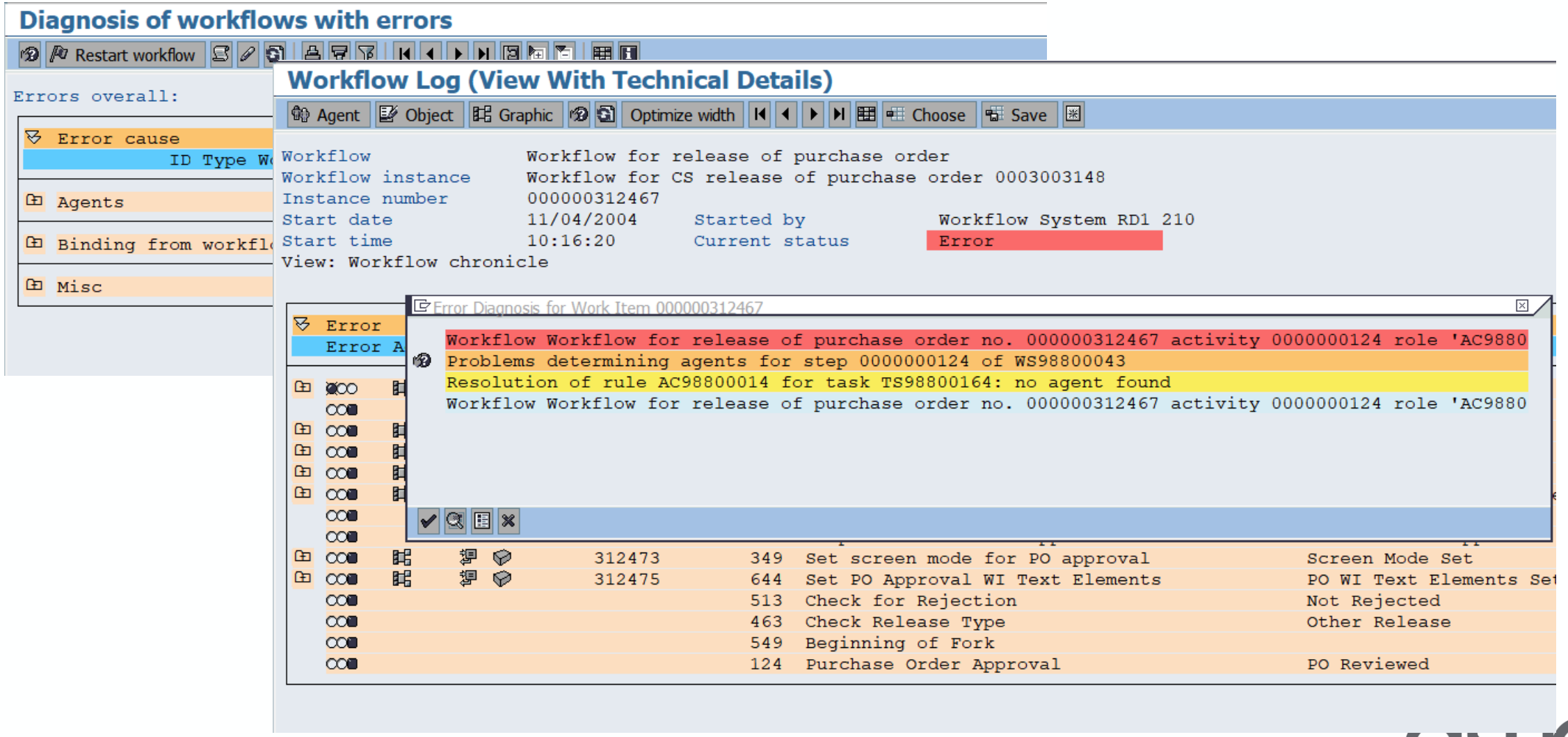
Diagnosis of workflows with errors

Restart workflow

Errors overall: 1,029

Error cause / ID Type Work item text	Number / CreateDate CreateTime
Agents	101
Binding from workflow to work item	14
Misc	915

Scenario 3 – It's dead, Jim



Scenario 3 - It’s dead, Jim

- Check for Short Dumps
- Check for RFC calls
- If dialog task, check for Agent Resolution

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Daily checklist

- SWI2_DIAG – All WFs in error
- SM58 – failed RFC calls
- ST22 – Short Dumps

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Presentation Materials

Access the slides from 2019 ASUG Annual Conference here:

http://info.asug.com/2019-ac-slides

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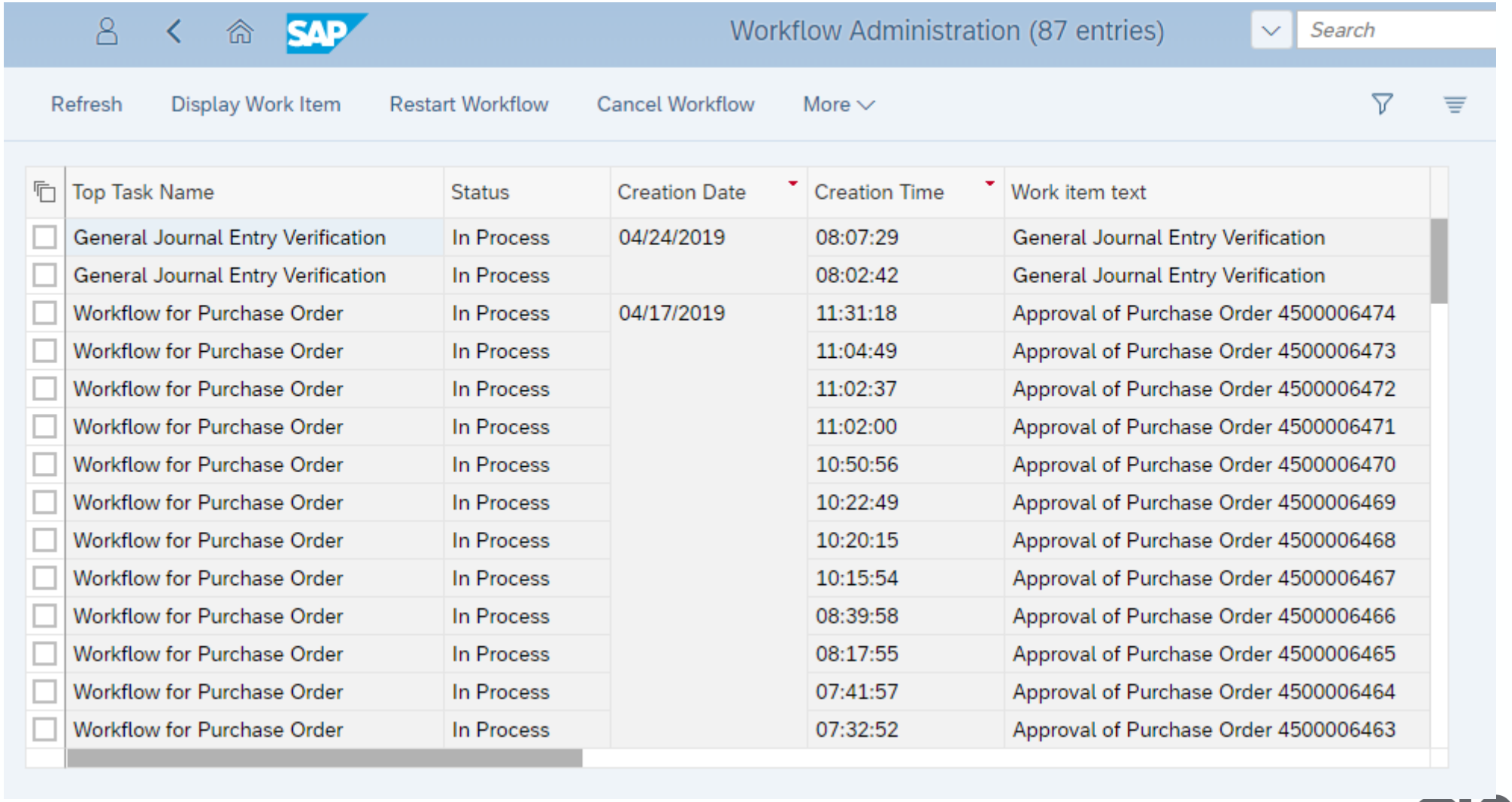
Q&A

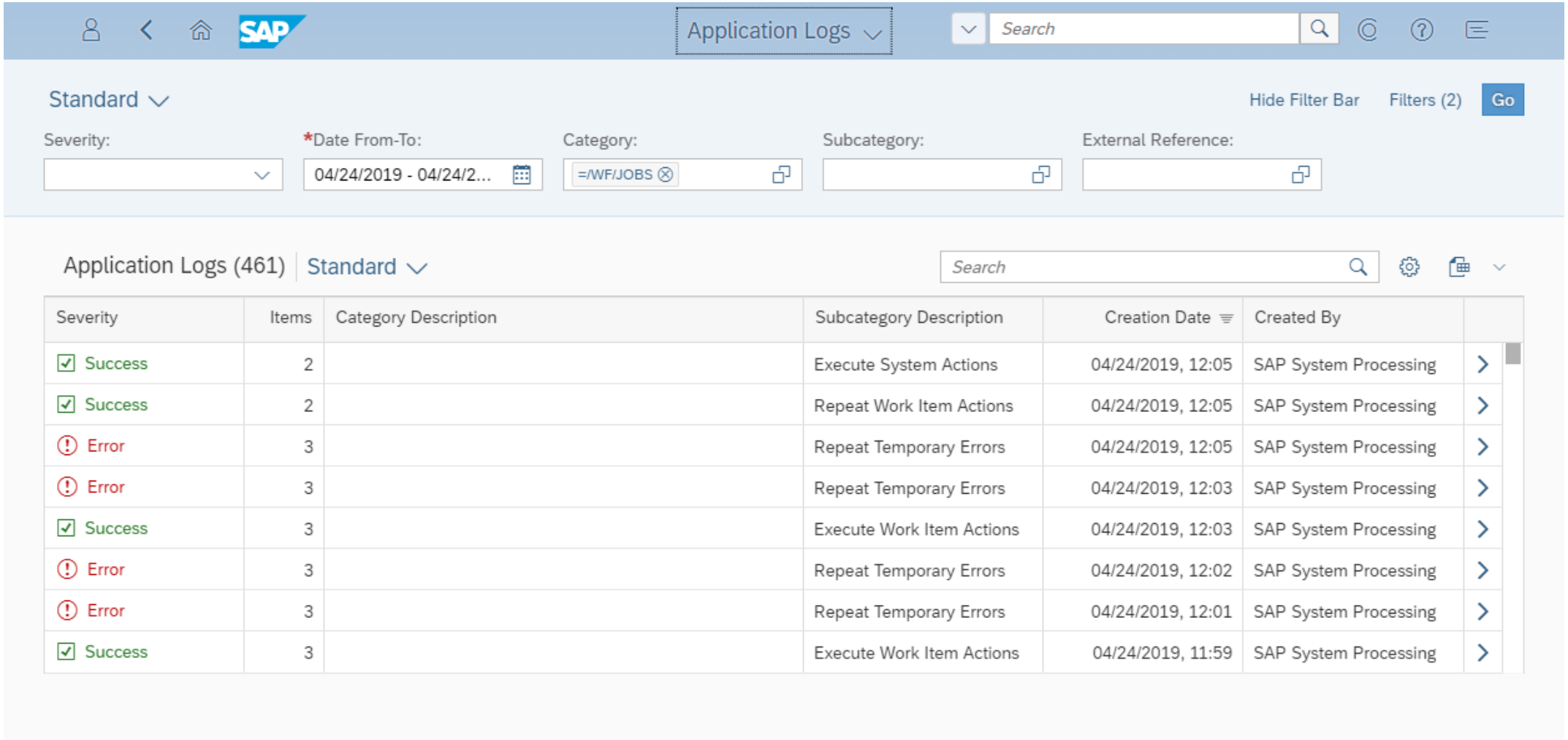
For questions after this session, contact us at [email] and [email].

But wait, that's not all!



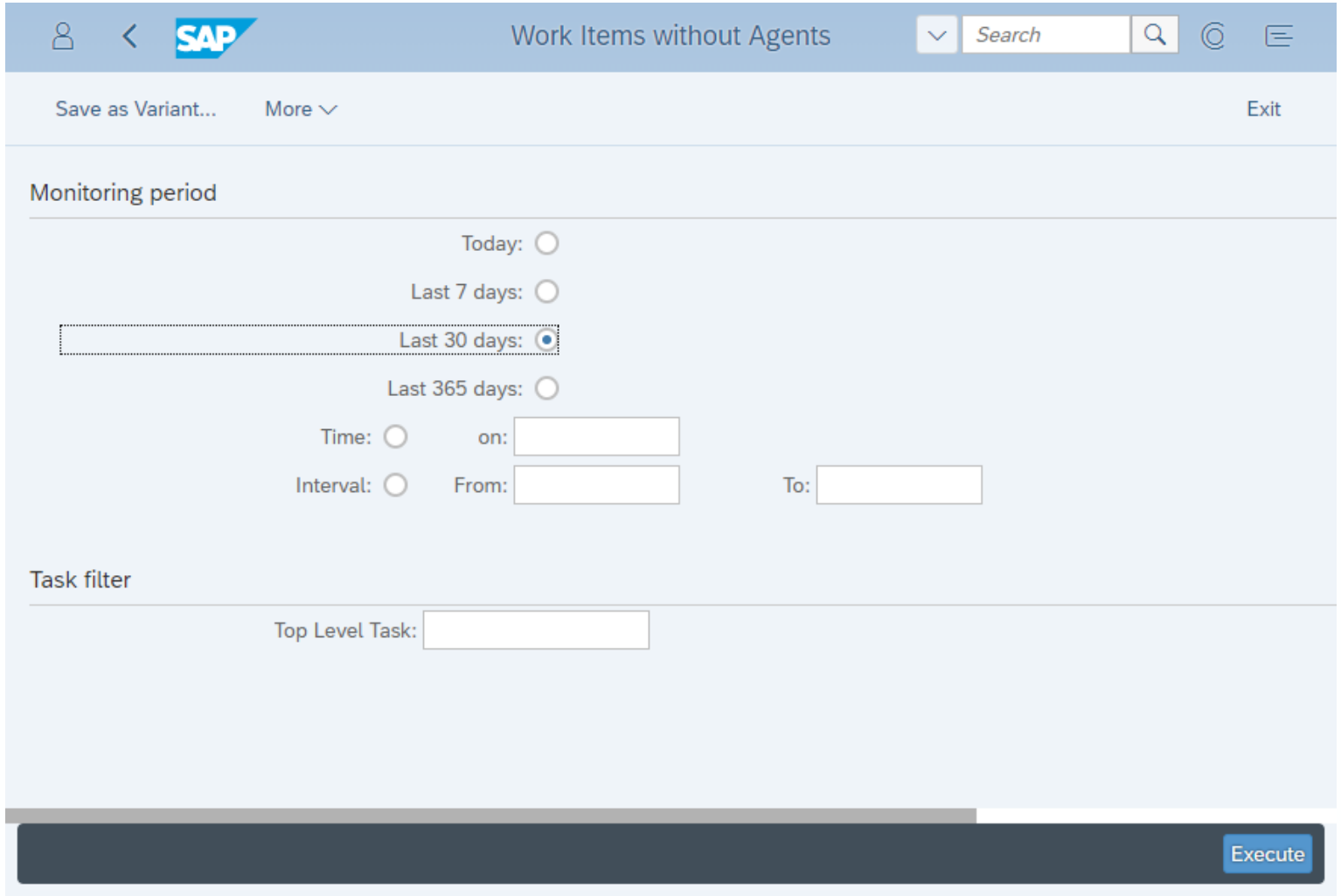
Top Task Name	Status	Creation Date	Creation Time	Work item text
General Journal Entry Verification	In Process	04/24/2019	08:07:29	General Journal Entry Verification
General Journal Entry Verification	In Process		08:02:42	General Journal Entry Verification
Workflow for Purchase Order	In Process	04/17/2019	11:31:18	Approval of Purchase Order 4500006474
Workflow for Purchase Order	In Process		11:04:49	Approval of Purchase Order 4500006473
Workflow for Purchase Order	In Process		11:02:37	Approval of Purchase Order 4500006472
Workflow for Purchase Order	In Process		11:02:00	Approval of Purchase Order 4500006471
Workflow for Purchase Order	In Process		10:50:56	Approval of Purchase Order 4500006470
Workflow for Purchase Order	In Process		10:22:49	Approval of Purchase Order 4500006469
Workflow for Purchase Order	In Process		10:20:15	Approval of Purchase Order 4500006468
Workflow for Purchase Order	In Process		10:15:54	Approval of Purchase Order 4500006467
Workflow for Purchase Order	In Process		08:39:58	Approval of Purchase Order 4500006466
Workflow for Purchase Order	In Process		08:17:55	Approval of Purchase Order 4500006465
Workflow for Purchase Order	In Process		07:41:57	Approval of Purchase Order 4500006464
Workflow for Purchase Order	In Process		07:32:52	Approval of Purchase Order 4500006463

But wait, that's not all!



Severity	Items	Category Description	Subcategory Description	Creation Date	Created By
Success	2		Execute System Actions	04/24/2019, 12:05	SAP System Processing
Success	2		Repeat Work Item Actions	04/24/2019, 12:05	SAP System Processing
Error	3		Repeat Temporary Errors	04/24/2019, 12:05	SAP System Processing
Error	3		Repeat Temporary Errors	04/24/2019, 12:03	SAP System Processing
Success	3		Execute Work Item Actions	04/24/2019, 12:03	SAP System Processing
Error	3		Repeat Temporary Errors	04/24/2019, 12:02	SAP System Processing
Error	3		Repeat Temporary Errors	04/24/2019, 12:01	SAP System Processing
Success	3		Execute Work Item Actions	04/24/2019, 11:59	SAP System Processing

But wait, that's not all!



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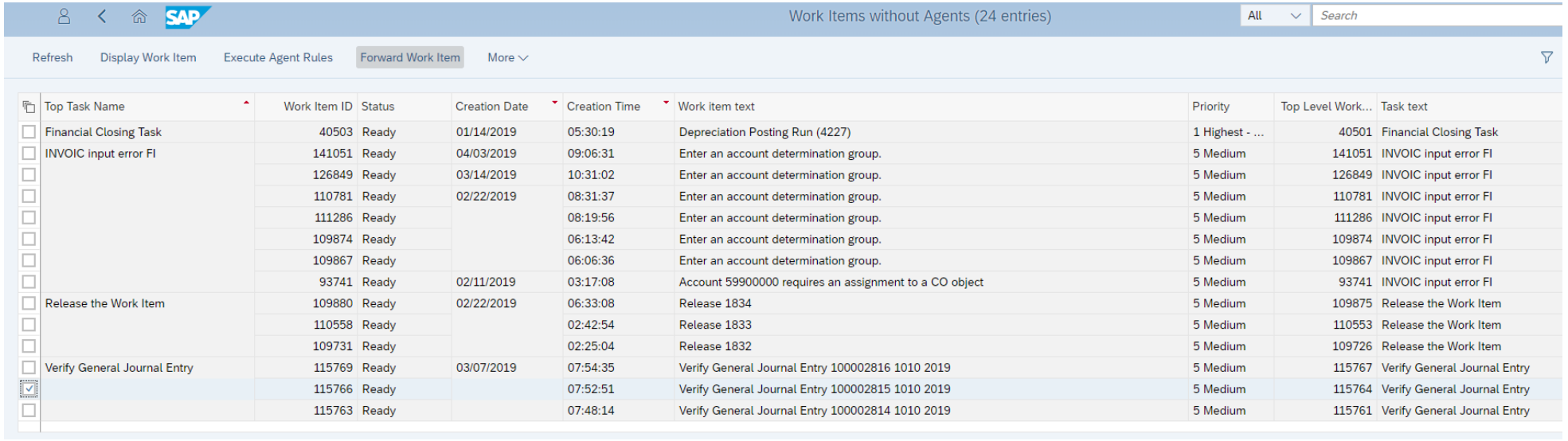

Top Task Name	Work Item ID	Status	Creation Date	Creation Time	Work item text	Priority	Top Level Work...	Task text
Financial Closing Task	40503	Ready	01/14/2019	05:30:19	Depreciation Posting Run (4227)	1 Highest - ...	40501	Financial Closing Task
INVOIC input error FI	141051	Ready	04/03/2019	09:06:31	Enter an account determination group.	5 Medium	141051	INVOIC input error FI
	126849	Ready	03/14/2019	10:31:02	Enter an account determination group.	5 Medium	126849	INVOIC input error FI
	110781	Ready	02/22/2019	08:31:37	Enter an account determination group.	5 Medium	110781	INVOIC input error FI
	111286	Ready		08:19:56	Enter an account determination group.	5 Medium	111286	INVOIC input error FI
	109874	Ready		06:13:42	Enter an account determination group.	5 Medium	109874	INVOIC input error FI
	109867	Ready		06:06:36	Enter an account determination group.	5 Medium	109867	INVOIC input error FI
	93741	Ready	02/11/2019	03:17:08	Account 59900000 requires an assignment to a CO object	5 Medium	93741	INVOIC input error FI
Release the Work Item	109880	Ready	02/22/2019	06:33:08	Release 1834	5 Medium	109875	Release the Work Item
	110558	Ready		02:42:54	Release 1833	5 Medium	110553	Release the Work Item
	109731	Ready		02:25:04	Release 1832	5 Medium	109726	Release the Work Item
Verify General Journal Entry	115769	Ready	03/07/2019	07:54:35	Verify General Journal Entry 100002816 1010 2019	5 Medium	115767	Verify General Journal Entry
	115766	Ready		07:52:51	Verify General Journal Entry 100002815 1010 2019	5 Medium	115764	Verify General Journal Entry
	115763	Ready		07:48:14	Verify General Journal Entry 100002814 1010 2019	5 Medium	115761	Verify General Journal Entry

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