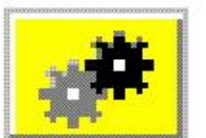


# Workflow SIG

Sunday September 22  
2:15 pm - 4:15 pm  
Moscone West - 2002/20

John Peters  
JRPJR, Inc



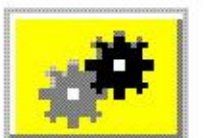
---

# Introduction

- **John Peters**, Independent Consultant  
Workflow SIG Coordinator  
JRPJR, Inc.  
john.peters@jrpjr.com
- **Karen Brownfield**, Oracle Practice Director  
Infosemantics, Inc.
- **Jerry Ireland**, Principal  
Rightsizing, Inc.

We don't work for Oracle but we both have extensive experience with the Oracle Workflow product

- **Vijay Shanmugam**, Senior Development Manager, Oracle



# TUNE IN to the OAUG

Find out why thousands of Oracle Applications users around the world connect through the Oracle Applications Users Group.

Live from **Booth #3416 in Moscone West**, RadiOAUG features interviews with key Oracle executives, session presenters, product specialists and OAUG leaders.

Take home tips, tricks and first-hand information from the experts.

**Have your badge scanned for your chance to win:**

- RadiOAUG Bluetooth speaker systems
- iTunes and Google Play gift cards
- Pandora One gift certificates

**One Grand Prize Winner** will receive a free registration to the COLLABORATE 14 conference in Las Vegas plus two tickets to see the hit musical *Rock of Ages*.



**OAUG™**



Connection Point®  
SEMINARS

**Three Topics. Two Days.  
One Great Event.**



## **OAUG Connection Point® EPM/BI/EBS 12.X**

October 22-23, 2013

Pre-Conference Workshops:

October 21, 2013

Hilton Alexandria Mark Center

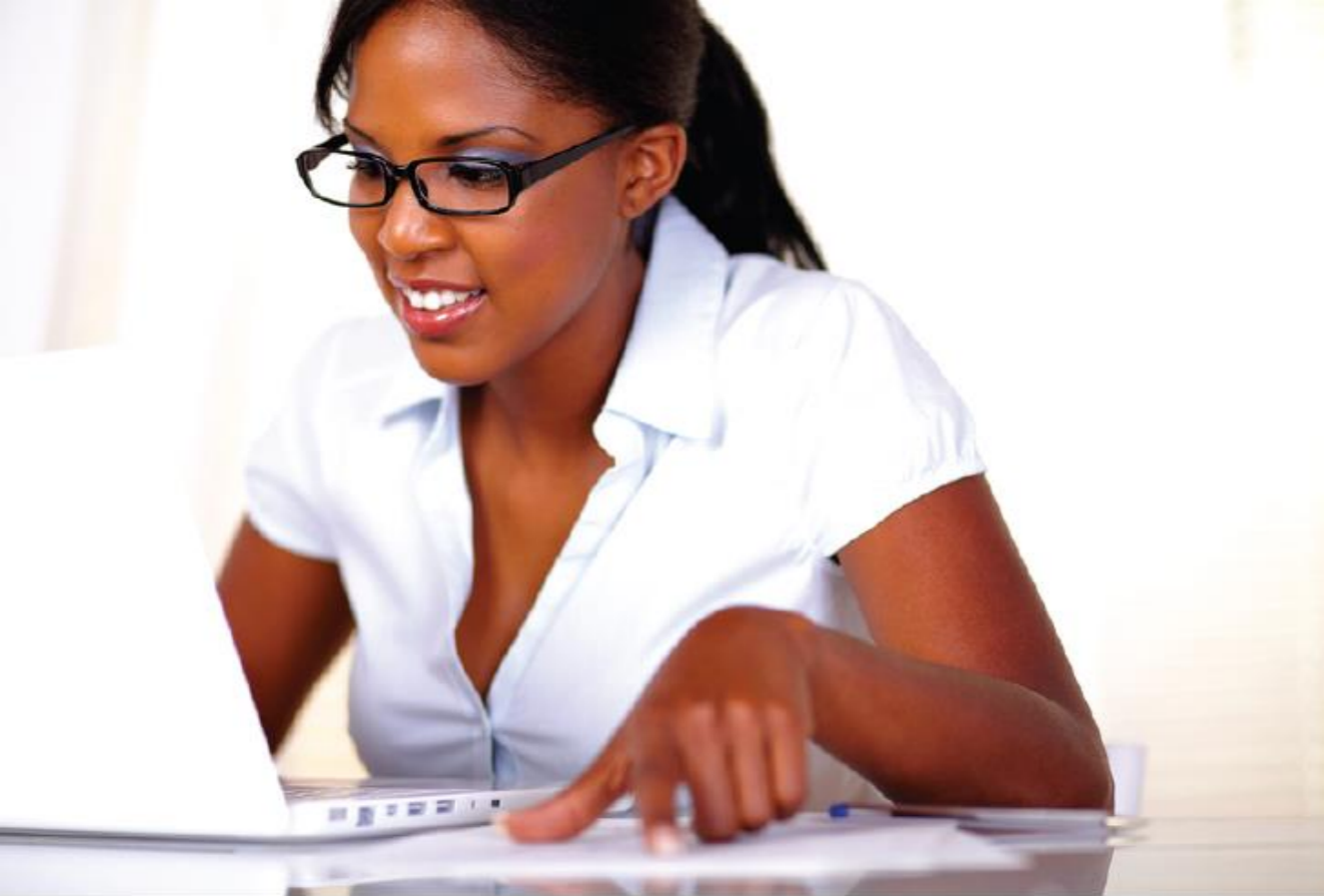
Washington D.C. USA

### **Keynote Speaker:**



Jeanne Lowell  
Vice President  
Oracle E-Business Suite Strategy  
Oracle Corporation

**Search education sessions or register at [cp.oaug.org](http://cp.oaug.org) today**



# Premium Education, Delivered Right to Your Desk. Oracle Primavera Online Series

The Oracle Primavera Special Interest Group (OPSIG) invites you attend a two-week series of one-hour webinars designed to give you access to educational content, updates and case studies tailored for Oracle Primavera users.

## WEEK 1:

October 28-November 1, 2013

## WEEK 2:

November 4-November 8, 2013

*Presented by:*



***Register at [primaverasig.com](http://primaverasig.com)***



# COLLABORATE14

TECHNOLOGY AND APPLICATIONS FORUM  
FOR THE ORACLE COMMUNITY

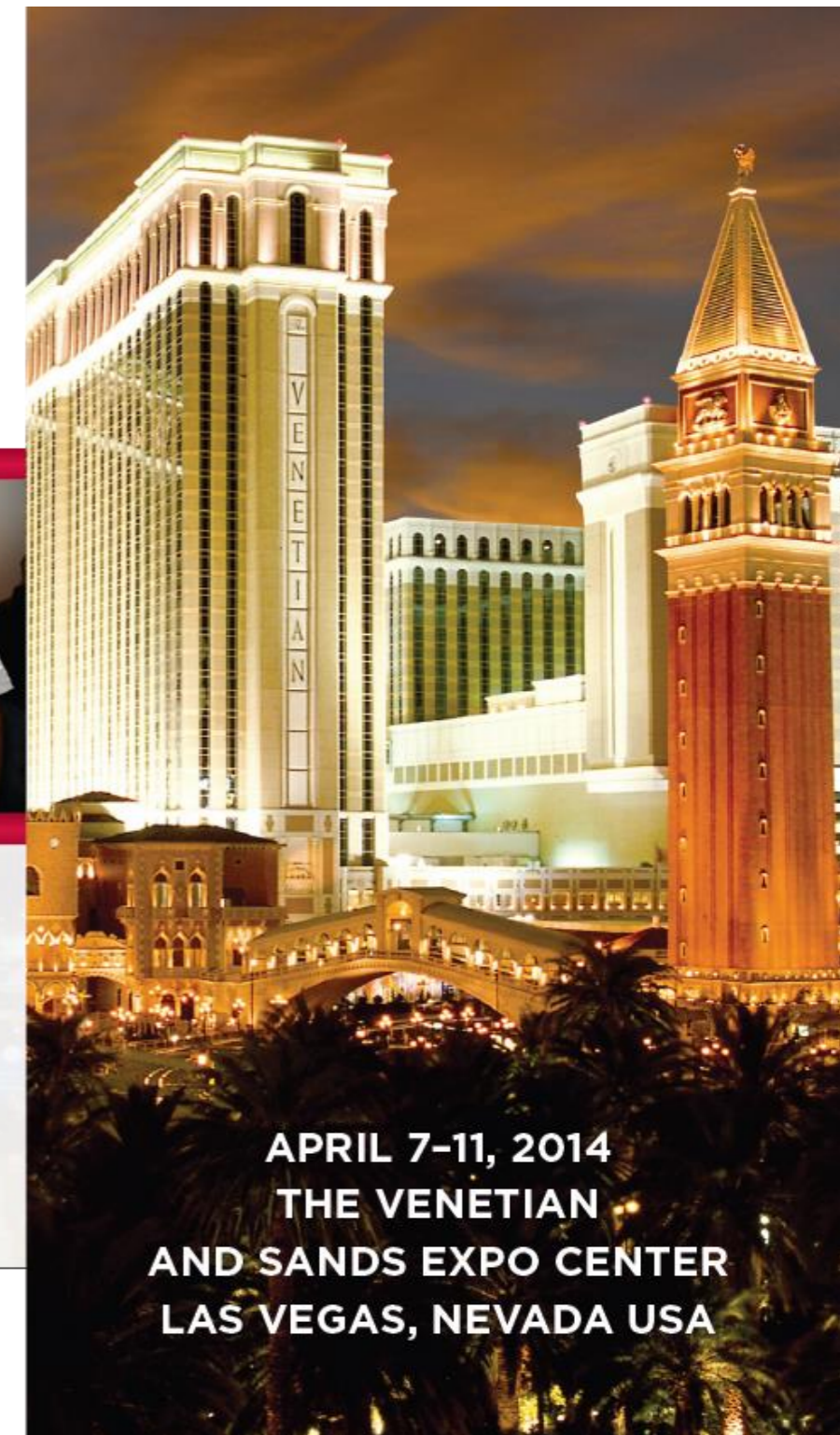


[collaborate.oaug.org](http://collaborate.oaug.org)  
#C14LV



- Connect with Thousands of Real Users
- Learn from Other Companies' Experiences
- Choose Your Own Agenda from 1,000+ User-Led Sessions
- Enjoy an Exciting New Venue - The Venetian!

Speak Up & Share Your Expertise! Earn Free Registration as a COLLABORATE 14 Speaker  
Call for Presentations Deadline: Friday, October 4, 2013  
Registration Opens October 30, 2013



**APRIL 7-11, 2014**  
**THE VENETIAN**  
**AND SANDS EXPO CENTER**  
**LAS VEGAS, NEVADA USA**

# Back by Popular Demand!

## OAUG Connection Point® — AppsTech Pittsburgh, PA, USA SUMMER 2014

You won't want to miss this incredible two-day seminar, centered on Applications Technology components that support Oracle E-Business Suite, including but not limited to:

- Weblogic
- Concurrent Manager Tuning
- Cloning
- Upgrades
- Patching
- Workflow tuning
- Development
- System administration
- Installation

*This seminar DOES NOT include functional presentations related to specific products such as general ledger, accounts payable or cash management.*



More details coming soon at [cp.oaug.org](http://cp.oaug.org)

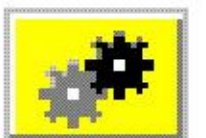
## Call for Papers:

- **COLLABORATE 14 OAUG Forum Call for Presentations**

Now through October 4

- **OAUG Connection Point – AppsTech 2014**

Keep your eyes open

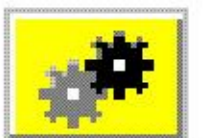


---

# Agenda



- Future of Workflow
- Current Workflow Functionality
- Future Workflow Enhancements
- Other resources for Workflow Information
- Questions and Answers

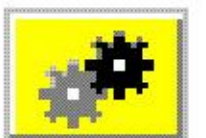


---

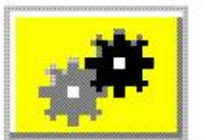
# This Presentation is Posted



- I will reference many My Oracle Support Notes, but don't worry about writing them all down. Just get one of these two URL's.
- This presentation is on the OAUG Workflow SIG web site:  
<http://workflowsig.oaug.org/>  
As well as my web site:  
<http://jrpjr.com>  
In fact that is what I am using here for this presentation

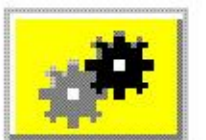


# Future of Workflow



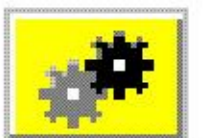
# Future of Workflow

- De-supported as an Oracle product for **standalone** use.  
<http://www.oracle.com/technetwork/middleware/ias/workflow-sod-089843.html>
- No longer part of the 11G DB install. Will be installed as a patch as part of the Apps Tech Stack.
- Still heavily used in R12 and will be supported by Applications Technology Group.
- R12 SubLedger Accounting use is on the rise replacing the Account Generators.
- Will not be used in Fusion.
- It is still being enhanced as a product and in R12 functional usage is being expanded (example PO Approvals now using AME)



If you are using Oracle R12 EBS you will continue to use Oracle Workflow, it is an integral component of the Oracle EBS.

Oracle Development is continuing to enhance Oracle Workflow.

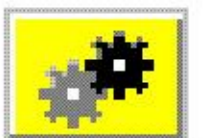


---

# Primary Replacement



- BPEL (Business Process Execution Language) Process Manager is the primary replacement for Workflow Technology.
- You can use BPEL Process Manager today with your 11i and R12 Applications.
- This is part of the Oracle SOA Suite, licensing might be required.
- Attend some of the BPEL sessions at OpenWorld to get some exposure to this powerful tool.
- SubLedger Accounting is the primary replacement for Account Generators



---

# Workflow to BPEL Migration



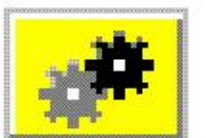
- There will be no automated conversion/migration available.
- The technology while similar is too different to support an automated conversion
- A good reference on migrating to BPEL is:

Migrating to BPEL from Oracle Work Flow

An Oracle White Paper

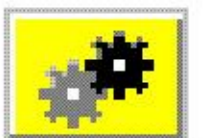
March 2008

<http://www.oracle.com/technetwork/middleware/ias/owf2bpel-132189.pdf>



# OAUG BPEL References

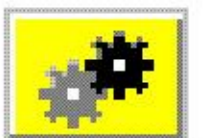
- BPEL Process Manager: Tips and Techniques  
Hilal Khan, COLLABORATE 07
- BPEL for Workflow Developers  
Jerry Ireland, COLLABORATE 08
- From Workflow to BPEL, Prepare for the Future  
Arian Stijf, COLLABORATE 12
- Oracle BPEL 11g Training  
Basheer Khan, COLLABORATE 10



# OAUG SubLedger Accounting Refs



- Introduction to the Subledger Accounting Engine in Oracle R12  
Thomas Simkiss, COLLABORATE 08
- Let Subledger Accounting Custom Sources Release You From Account Generator Workflows  
Manoj Menon, COLLABORATE 12
- Transitioning from Account Generators to the R12 Subledger Accounting Engine  
Alyssa Johnson, COLLABORATE 10
- Turbo-Charge Your Accounting With the Release 12 Subledger Accounting Engine  
Alyssa Johnson, COLLABORATE 12
- Demystifying the new Release 12.1 Subledger Accounting Engine  
Alyssa Johnson, OAUG Connection Point - Austin 2012

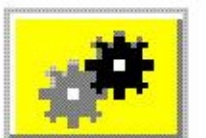


---

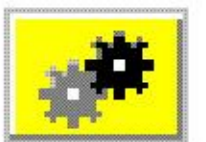
# OAUG Presentations



- In order to access the OAUG Conference Presentation database you must be an OAUG Member
- One more reason to be an OAUG Member Company

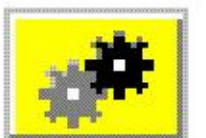


# Current Workflow Functionality



# Workflow Analyzer Script

- Workflow Analyzer script for E-Business Suite Workflow Monitoring and Maintenance [ID 1369938.1]  
Latest Version (v5.01) (v5.02 is soon to be released)
- How to run EBS Workflow Analyzer Tool as a Concurrent Request [ID 1425053.1]
- Workflow Analyzer Tool FAQ [ID 1452224.1]
- This is a non-invasive SQL Script you can run against you system it will provide some very good information to help you manage the workflow product.



# Workflow Analyzer Script - Example

Workflow Analyzer Overview

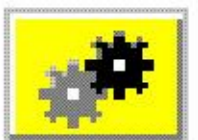
Workflow Runtime Data Table Gauge

Excessive  
 bad  
 critical  
 good

**Your overall Workflow HealthCheck Status is in need of Immediate Review!**  
 The WF\_ITEMS Table has obsolete workflow runtime data that is older than 3 years.

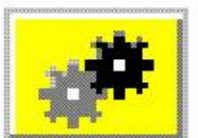
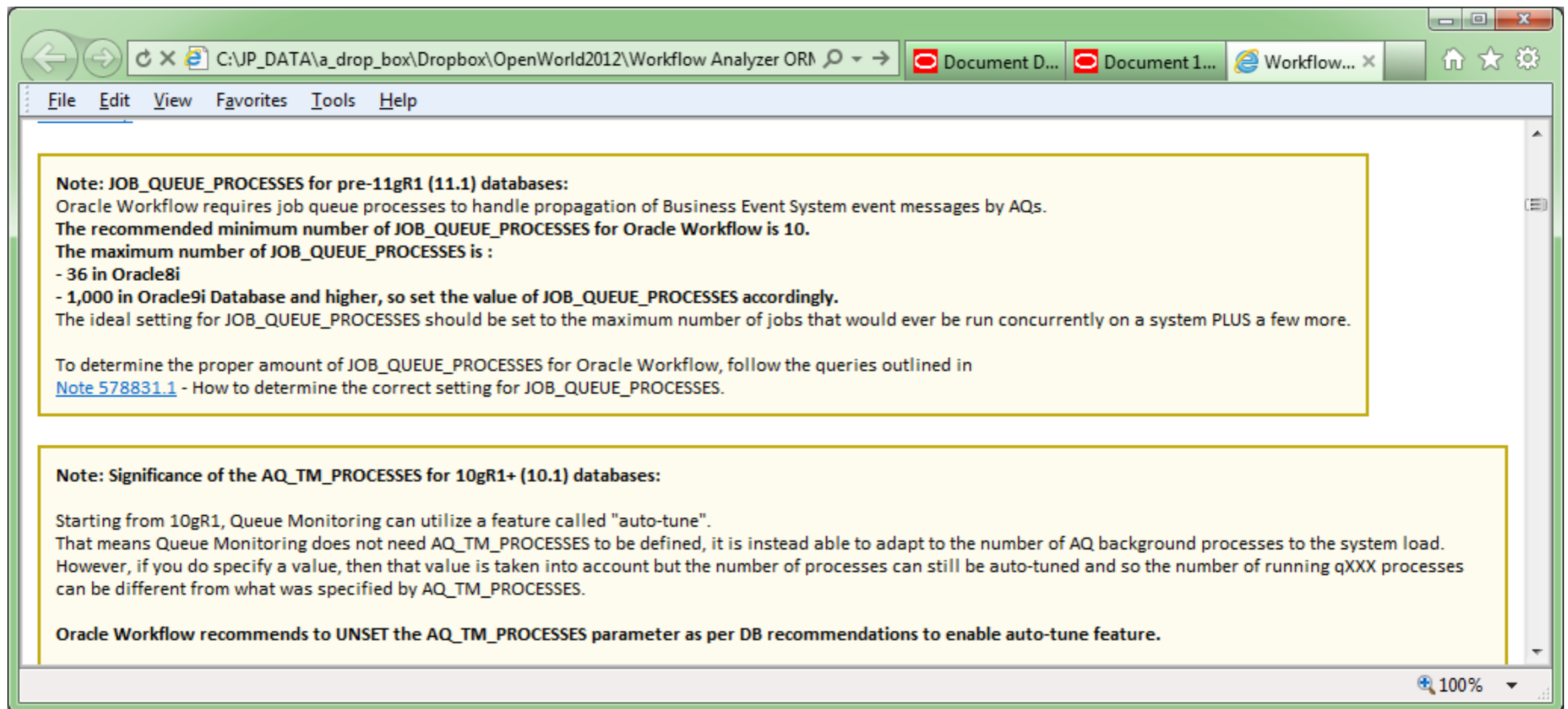
We reviewed all 128,214 rows in WF\_ITEMS Table for Oracle Applications Release 11.5.10.2 instance called ORDEV1 on dragon.west.ora.com  
 Currently 34% ( 43,361) of WF\_ITEMS are OPEN, while 66% ( 84,853) are CLOSED items but still exist in the runtime tables.

**Note:** Once a Workflow is closed, its runtime data that is stored in Workflow Runtime Tables (WF\_\*) becomes obsolete.  
 All the pertinent data is stored in the functional tables (FND\_\*, PO\_\*, AP\_\*, HR\_\*, OE\_\*, etc), like who approved what, for how much, for who, etc...)  
 Remember that each row in WF\_ITEMS is associated to 100s or 1000s of rows in the other WF runtime tables, so it is important to purge this obsolete runtime data regularly.



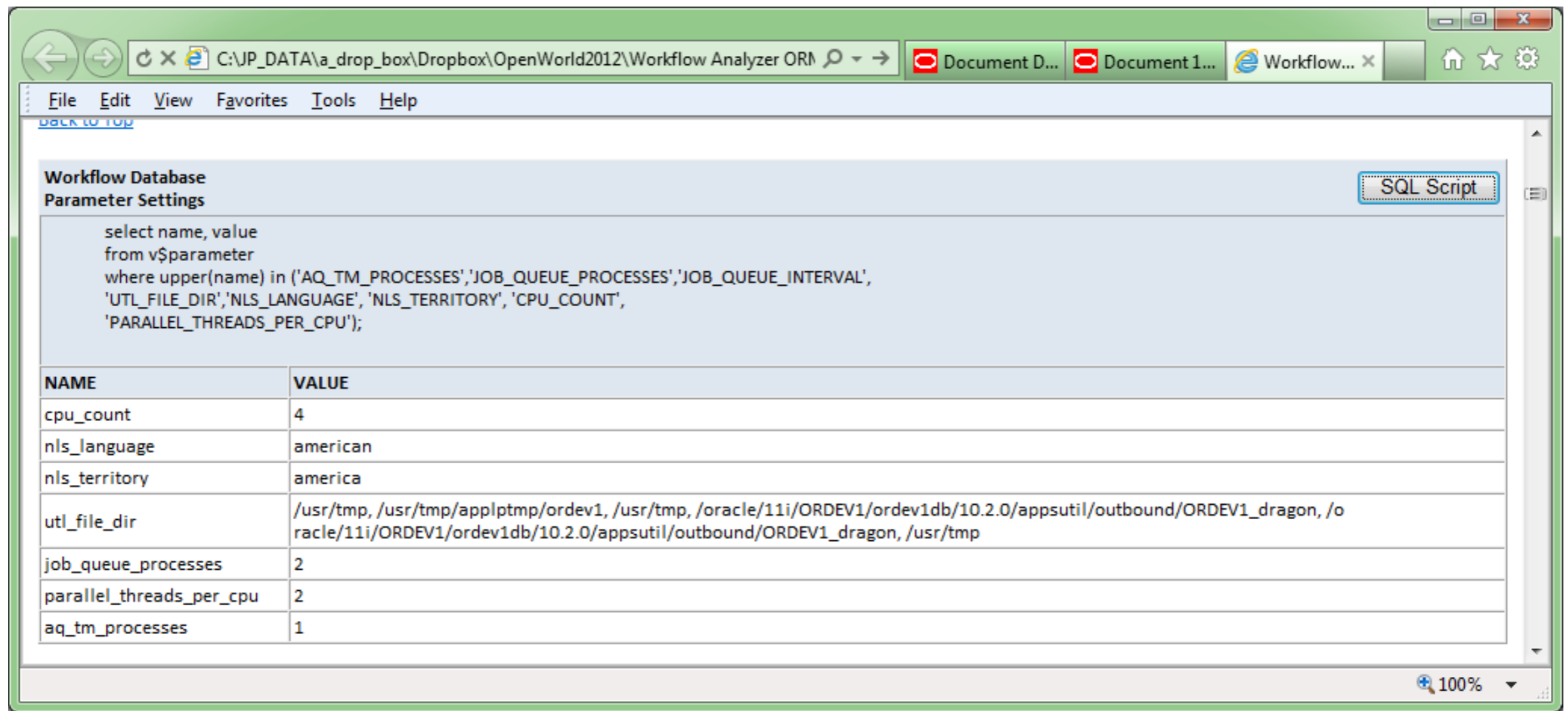
# Workflow Analyzer Script - Example

- This script not only provides data it also has comments and suggestions in the output with references to My Oracle Support.



# Workflow Analyzer Script - Example

- You can get the SQL that was run for each result (in case you want to drill deeper or filter differently).



Workflow Database  
 Parameter Settings

SQL Script

```
select name, value
from v$parameter
where upper(name) in ('AQ_TM_PROCESSES','JOB_QUEUE_PROCESSES','JOB_QUEUE_INTERVAL',
'UTL_FILE_DIR','NLS_LANGUAGE','NLS_TERRITORY','CPU_COUNT',
'PARALLEL_THREADS_PER_CPU');
```

NAME	VALUE
cpu_count	4
nls_language	american
nls_territory	america
utl_file_dir	/usr/tmp, /usr/tmp/applptmp/ordev1, /usr/tmp, /oracle/11i/ORDEV1/ordev1db/10.2.0/appsutil/outbound/ORDEV1_dragon, /o racle/11i/ORDEV1/ordev1db/10.2.0/appsutil/outbound/ORDEV1_dragon, /usr/tmp
job_queue_processes	2
parallel_threads_per_cpu	2
aq_tm_processes	1



---

# Purge Order Management WF

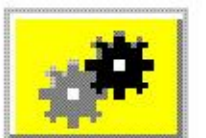


In 11i OM Line WF's can not be purged if the OM Header WF is still active

- So if you have a 100 line order, all lines are closed but one, you could not purge those 101 WF's

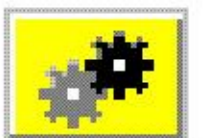
Now for 11i there is a 'Purge Order Management Workflow' concurrent program

- How To Use Concurrent Program "Purge Order Management Workflow" (Doc ID 878032.1)



# PO Approvals Using AME

- AME will allow add: Approvers, Reviewers, E-Signers
- AME will allow any Purchase Order to be withdrawn as long as the approval status is 'In Process'
- 12.1 AME : Approval, E-Review, E-Sign and Withdrawal Features for Purchase Orders [ID 1487661.1]
  - This note details the patches, setup steps, and functionality provided along with videos
- 12.1.3 - Required Setups For Purchase Order Approval Using Approvals Management Engine (AME) [ID 1487713.1]



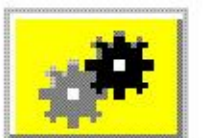
---

# New Worklist Features

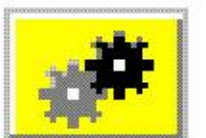


Patch 13646173 for 12.1.3 introduces some new Worklist features

- See the last action and comments from the approver on top of a notification
- Submitter can reassign a request for information notification
- Actual sent date comes from the reassign action



# Future Workflow Enhancements



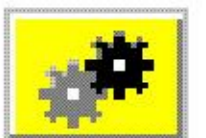
---

# R12.2 Changes



- **Oracle Workflow Release Notes for Release 12.2 [ID 1375779.1]**

What is not talked about in this release note is the Edition Based Redefinition functionality changes around Workflow. From a user perspective they should be transparent, not sure about a developer, or administrator.

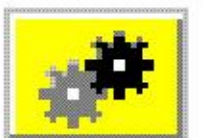


---

# R12.2 Changes



- **Deferring Worklist Response Processing**  
You can defer user Worklist Responses to Workflow Background Process, allowing the users session to immediately return control to the user.

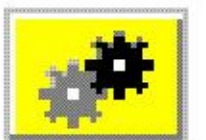


---

# R12.2 Changes



- **Oracle Workflow E-mail Character Encoding Configuration**  
Workflow Administrator can now specify the character encoding for each language in workflow notifications.



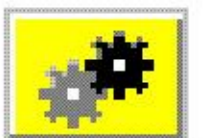
---

# R12.2 Changes



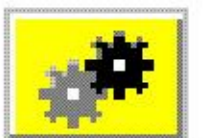
- **Worklist Usability Enhancements**

- You can now use the special message attribute #RELATED\_HISTORY to include the action history of another notification within response-required notifications as well as within FYI notifications.
- A user who receives a request for more information can now transfer that request to another user and include a comment to that user.
- Improvements on the Date Sent for reassigned notifications now showing the date of the reassignment, not the original notification date.
- Notification Details displays if the notification has been delegated or transferred along with any comment provided.



# Other Enhancements

- Worklist Mobile Application
- RESTful access to Worklist data, which means using these services custom mobile and web apps can be developed.
- Worklist will be available as a pull down list from the global header in EBS self-service pages. Instead of occupying space on the home page, the worklist can be accessed from anywhere during self-service navigation since the Worklist icon will always be present on the header.
- Bulk reset users with notification preference set to DISABLED. Mailer resets notification preference for a user if emails bounced or email address was invalid. After fixing the original issue, the preference can now be reset to original value using a Concurrent Program.

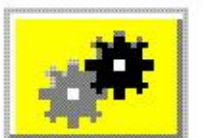


---

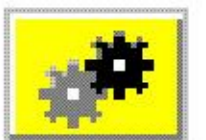
# Workflow Lives On! in R12



- **So yes Workflow continues to live on, even though it has been desupported for **standalone** use.**
- **For more information:**  
Oracle E-Business Suite Releases 12.1 and 12.2 Release Content Documents  
[ID 1302189.1 ]

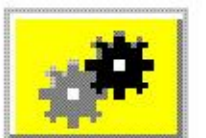


# WORKFLOW TIPS



# Non-PROD WF Mail Boxes

- All EBS Customers have Non-Production Instances
- For these Non-Production Instances have your Workflow Notifications go to a common GMAIL box that the users can all log into for testing purposes:
  - ✓ Set the Override Account email address in the Workflow Notification Mailers to this GMAIL account
  - ✓ The Notifications still state who they were being sent to so a single testing user can perform multiple approver actions

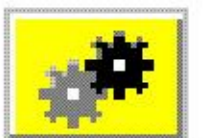


---

# Grant Worklist Access



- The following slides are from Karen Brownfield, Infosemantics, Inc.



# Grant Worklist Access

- From Functional Administrator
  - Grants Tab, Create Grant

Security | Core Services | Personalization | File Manager | Portletization

Grants | Permissions | Permission Sets

Grants

Save Search

**Search**

The search is case insensitive.

Name

Grantee Type

Set

Object

Go Clear

Create Grant

Name	Grantee Type	Grantee	Set	Object	Data Context Type	Access Policy	Last Update	Duplicate	Update	Delete
No search conducted.										

# Grant Worklist Access

Security | Core Services | Personalization | File Manager | Portletization

Grants | Permissions | Permission Sets

Define Grant | Select Object Data Context | Define Object Parameters and Select Set | Review and Finish

Create Grant: Define Grant

\* Indicates required field

Cancel Step 1 of 4 Next

\* Name Grant Access to SYSADMIN's emails to OPERATIONS

Description

\* Effective From 04-Mar-2013 (example: 17-Feb-2013)

**Security Context**

Define the context when the grant is applied

Grantee Type Specific User

\* Grantee Stock, Pat

Operating Unit

Responsibility

**Data Security**

To define a data security policy, select an object

Object Notifications

**Search and Select: Grantee**

Cancel Select

**Search**

To find your item, select a filter item in the pulldown list and enter a value in the text field, then select the "Go" button.

Search By Code Operations Go

**Results**

Select	Quick Select	Name	Code	Email Address
<input type="radio"/>		operations@computersvcsrental.com	OPERATIONS@COMPUTERSVCSRENTAL.COM	nobody@localhost
<input checked="" type="radio"/>		Stock, Pat	OPERATIONS	nobody@localhost

About this Page

Cancel Step 1 of 4 Next

# Grant Worklist Access

The screenshot shows the 'Create Grant: Select Object Data Context' step. The breadcrumb trail is Security > Grants > Permissions > Permission Sets. The progress bar indicates the current step is 'Select Object Data Context'. The 'Object' is 'Notifications'. The 'Data Context Type' is 'Instance Set'. Below this, a table shows the selected data context: '\* Instance Set' with the name 'Worklist Proxy Access'. A 'Loading...' button is visible below the table. Navigation buttons 'Cancel', 'Back', 'Step 2 of 4', and 'Next' are at the top right.

The screenshot shows the 'Create Grant: Define Object Parameters and Select Set' step. The breadcrumb trail is Security > Grants > Permissions > Permission Sets. The progress bar indicates the current step is 'Define Object Parameters and Select Set'. The 'Object' is 'Notifications'. The 'Data Context' section shows: Type 'Instance Set', Name 'Worklist Proxy Access', and Description 'This instance set stripes notifications sent to an user.'. The 'Predicate' section contains the SQL: '&TABLE\_ALIAS.TO\_USER = &GRANT\_ALIAS.PARAMETER1.'. The 'Instance Set Details' section has a text input for 'Parameter 1' with the value 'SYSADMIN' and an empty input for 'Parameter 2'. The 'Set' section has a text input for '\* Set' with the value 'Worklist Permission Set'. Navigation buttons 'Cancel', 'Back', 'Step 3 of 4', and 'Next' are at the top right.

Users that Grantee can see

Abstract Functions

# Grant Worklist Access

Define Grant      Select Object Data Context      Define Object Parameters and Select Set      Review and Finish

**Create Grant: Review and Finish** Cancel Back Step 4 of 4 Finish

Name **Grant Access to SYSADMIN's emails to OPERATIONS**  
 Description  
 Effective From **04-Mar-2013**  
 Effective To

**Security Context**

Grantee Type **Specific User**  
 Grantee **Stock, Pat**  
 Operating Unit  
 Responsibility

**Data Security**

Object **Notifications**

**Data Context**

Type **Instance Set**  
 Name **Worklist Proxy Access**  
 Description **This instance set stripes notifications sent to an user.**

**Predicate**

**&TABLE\_ALIAS.TO\_USER =  
&GRANT\_ALIAS.PARAMETER1.**

**Instance Set Details**

Parameter 1 **SYSADMIN**  
 Parameter 2  
 Parameter 3  
 Parameter 4  
 Parameter 5  
 Parameter 6  
 Parameter 7  
 Parameter 8  
 Parameter 9  
 Parameter 10

**Set**

Name **Worklist Permission Set**  
 Code **FND\_WF\_WORKLIST**  
 Description **This Permission Set is to grant Full Access to Worklist.**

Oracle Applications Home Page >  
 Switch User  
 Current User **Stock, Pat** Cancel Apply

Select	Name	Email
<input type="radio"/>	SYSADMIN	
<input type="radio"/>	Stock, Pat	<a href="mailto:nobody@localhost">nobody@localhost</a>

Cancel Apply

Results

# Grant Worklist Access

- From Worklist Access, choice is limited to active workflows or those in Lookup WF\_RR\_ITEM\_TYPES

**Security** | Core Services | Personalization | File Manager | Portletization

**Grants** | Permissions | Permission Sets

Security: Grants > Update Grant >

View Grant: SBEHN - View emails to SYSADMIN for workflows APEXP, OMERROR, WFERROR

Name **SBEHN - View emails to SYSADMIN for workflows APEXP, OMERROR, WFERROR**  
Description  
Effective From **22-Mar-2013**  
Effective To

**Security Context**

Grantee Type **Specific User**  
Grantee **Stock, Pat**  
Operating Unit  
Responsibility

**Data Security**

Object **Notifications**

**Data Context**

Type **Instance Set**  
Name **Worklist Proxy Access**  
Description **This instance set stripes notifications sent to an user.**

**Predicate**

**&TABLE\_ALIAS.TO\_USER =  
&GRANT\_ALIAS.PARAMETER1.**

**Instance Set Details**

Parameter 1 **SYSADMIN**  
Parameter 2 **APEXP,OMERROR,WFERROR**  
Parameter 3  
Parameter 4  
Parameter 5  
Parameter 6  
Parameter 7  
Parameter 8  
Parameter 9  
Parameter 10

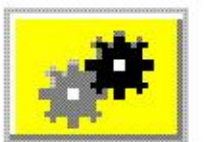
**Set**

Name **Worklist Permission Set**  
Code **FND\_WF\_WORKLIST**  
Description **This Permission Set is to grant Full Access to Worklist.**

Note: Predicate does not list Parameter2

Parameter2 stores specific workflows

# Other resources for Workflow Information

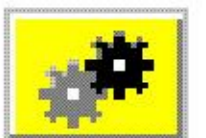


---

# OpenWorld WF Presentations



- **Making Workflow Flow [CON6629]**  
Jerry Ireland, Rightsizing, Inc.  
Moscone West 2009, Thu, Sep 26, 2:00 pm - 3:00 pm

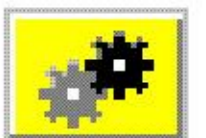


---

# Workflow PIC



- E-Business Suite: Oracle Workflow (WF) Product Information Center (PIC)  
[ID 1320509.1]



---

# Workflow Blog

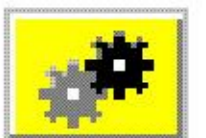


- **Workflow Blog**

<http://blogs.oracle.com/oracleworkflow>

Great information on using GMAIL SMTP and IMAP servers

- Administrators and Developers, post your pain points and suggestions for possible enhancements here

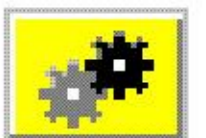


---

# Web Resources



- **Workflow SIG Web Site**  
<http://workflowsig.oaug.org/>
- **Integration Blog**  
<http://blogs.oracle.com/ebusinesssuiteintegration>



---

# Karen Brownfield, Infosemantics

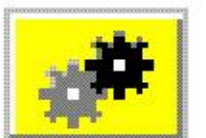
## Papers:

- **Workflow Performance Tuning**

Slides: <http://www.solutionbeacon.com/WorkflowPerformanceTuning.pdf> WP:  
<http://www.solutionbeacon.com/WorkflowPerformanceTuningWP.pdf>

- **Workflow Trouble Shooting**

Slides: <http://www.solutionbeacon.com/WorkflowTroubleshootingOAUG09.pdf>  
WP: <http://www.solutionbeacon.com/WorkflowTroubleshootingOAUG09WP.pdf>



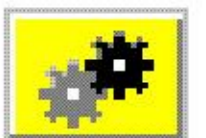
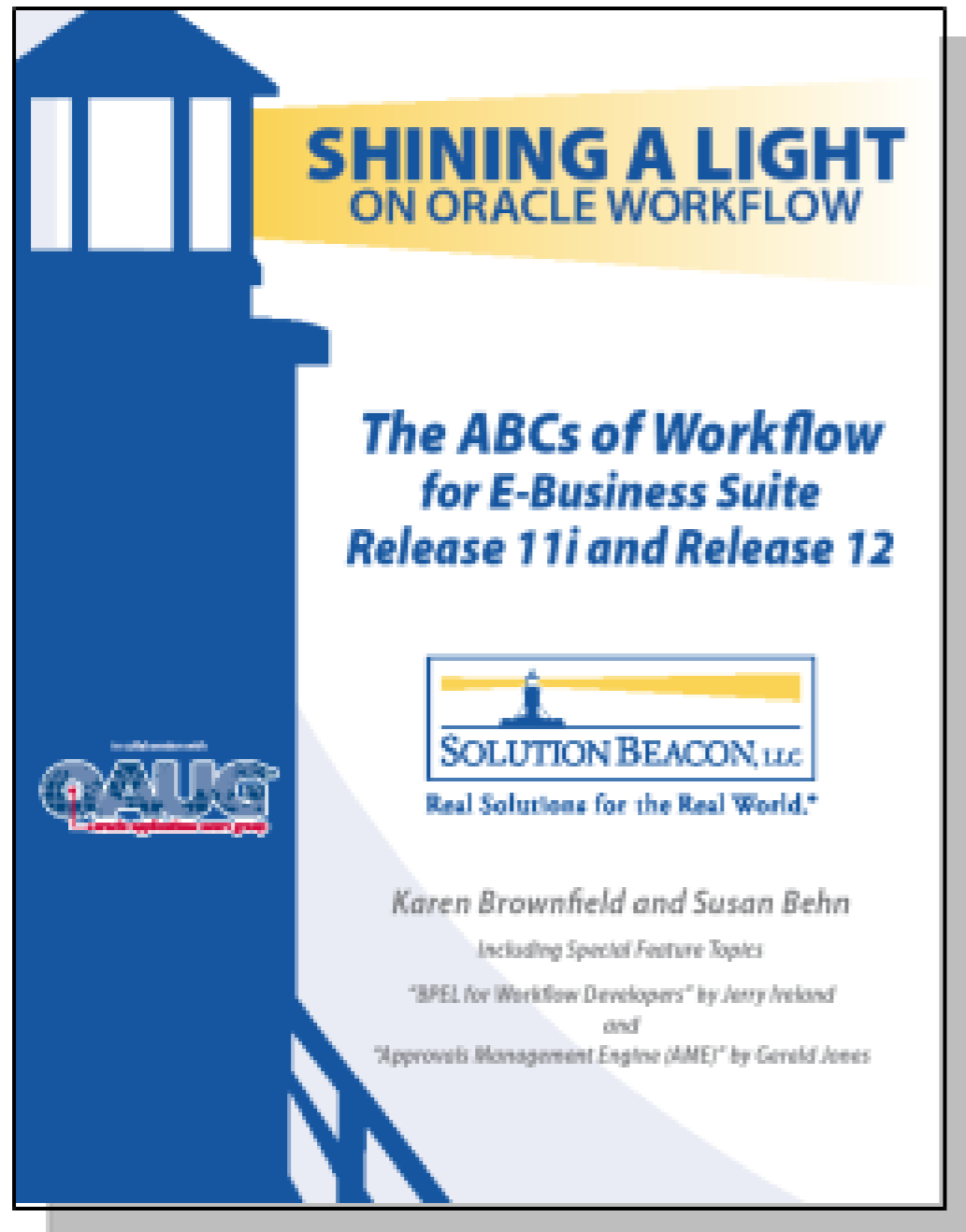
# Karen Brownfields reference book on Workflow



To purchase either the hard copy or electronic book

<http://lulu.com>

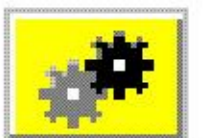
**Search for:**  
The ABCs of Workflow for E-Business Suite Release 11i and Release 12  
\$69.99



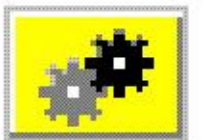
---

## R12.1.3 Patches to Consider

- Karen Brownfield and Jerry Ireland have gone through Oracle Supports patches and compared to what is in a fresh R12.1.3 install and generated a list of “good candidate” patches that users might want to consider.
- This list is not a complete and confident “recommended” patch list, but something users might want to review and consider.
- This patch list is posted on the Workflow SIG web site.  
<http://workflowsig.oaug.com>



Questions?  
Comments?



# THANK YOU

John Peters, JRPJR, Inc  
john.peters@jrpjr.com

This paper is posted on my web site along with many others I have done over the years:

<http://jrpjr.com/>

Click on Paper Archives on the right hand side, then:  
OpenWorld 2013 – Workflow SIG

