

# EBS Approvals Communication and History

**Session ID: 10670**

Approvals Series – Session 3 of 4

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Version 3

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#C16LV



# About the Speaker

- 23 years working with E-Business Suite
- Primarily a Technical Focus
- Workflow SIG Chairman
- Founding Board Member of the Northern California (NorCal) OAUG
- I enjoy sharing what I know about the Oracle E-Business Suite, I have many presentations posted on my web site at: <http://jrpjr.com>
- This is revision 3 of this presentation you can download it from my site at: <http://jrpjr.com>



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# Introduction to the Exploration Series



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- Since 2011 the Special Interest Groups have collaborated on joint presentations focused on a single threaded topic to allow conference attendees to participate in end-to-end business scenarios designed to stimulate conversation and educate end users.
- The Exploration Series is sponsored and supported by the OAUG:
- Special thanks to:
  - Mohan Iyer([mohan.iyer@jadeglobal.com](mailto:mohan.iyer@jadeglobal.com)) of the General Ledger Special Interest Group
  - Karen Brownfield ([karen.brownfield@infosemantics.com](mailto:karen.brownfield@infosemantics.com)) of the OAUG Board of Directors
  - Hans Kolbe ([Hanskolbe@Celantrasystems.com](mailto:Hanskolbe@Celantrasystems.com)) and Thomas Simkiss ([Tsimkiss@denovo-us.com](mailto:Tsimkiss@denovo-us.com)) of the Multi-National SIG
- **If there is a specific topic or area you'd like to see covered, please reach out to your SIG or chapter lead with ideas for future sessions**



# Approvals Series

## All Sessions in Breakers F

### Power Hour in Mandalay Bay C



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Session ID	Time	Title	Presenter
10672	Wed 4/13 8:00 – 9:00	EBS / Cloud: Key Concepts and Terms	Stanley Cohen– Denovo Ventures, LLC
10668	Wed 4/13 9:15-10:15	EBS Approvals List Creation, Limits, and Rules	Karen Brownfield – Infosemantics, Inc.
10670	Wed 4/13 3:00 – 4:00	EBS Approvals Communication and History	John Peters – JRP JR, Inc.
10659	Wed 4/13 4:15 – 5 :15	Approvals in Cloud – New and Improved	Lee Briggs – Denovo Ventures, LLC
10080	Tue 4/12 3:30 - 5:45	Power Hour - Approvals in EBS and the Cloud	All 4 speakers from above sessions in a panel/Q&A format

# Agenda

- Introduction
- Workflow Notifications in EBS
- Workflow Notification Customization
- Mobile Approvals Application (for iOS and Android)
- Archive of Approvals for Audit Purposes



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# Introduction

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# Introduction

- Karen's last session 'EBS Approvals List Creation, Limits, and Rules', covered basically how we can build a list of approvers in EBS
- This presentation will focus on how we communicate an approval requirement to those approvers in EBS



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# Introduction

- Approvals rely on Workflow Notifications functionality
- This presentation will cover some Workflow Notifications fundamentals to start with
- We will expand out to include some recent enhancements like the Approvals App for mobile
- Also we will discuss some potential issues related to historical Approvals retention



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# Workflow Notifications in EBS



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# Workflow Notifications



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- Workflow Notifications come in two basic types
  - FYI Notifications
    - Notification contains some information or details for the user to be aware of.
  - Response Required Notifications
    - Notifications contain some information and require a response
      - Users can request additional information
      - Responses come from a list of values
        - LOV's are assigned in the Workflow Builder
      - Transfer or Delegate approval to another user
        - User and Administrators can control this
      - Timeouts
        - Usually assigned in the Workflow Builder
        - Date/Time set when Notification was sent



# Workflow Notifications in EBS



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- Workflow Notifications are visible in the application in a Worklist which you can access

The screenshot displays the Oracle E-Business Suite interface. At the top, the header includes the Oracle logo, 'E-Business Suite', and user information 'Logged In As JOHN'. Below the header is a search bar with 'Enterprise Search' and 'Contract Documents' selected. The main content area is divided into two sections: 'Navigator' on the left and 'Worklist' on the right. The 'Navigator' section contains a list of application folders, including 'Application Developer', 'Application Diagnostics', 'Functional Administrator', and various 'ORM US' roles. The 'Worklist' section shows a table with columns 'From', 'Type', 'Subject', 'Sent', and 'Due'. The table is currently empty, with a message stating 'There are no notifications in this view.' Below the table, there is a checkbox for 'TIP Vacation Rules' and a link to 'Redirect or auto-respond to notifications.'





# Workflow Notification Global Preferences

- Workflow Notifications can also be sent to the users through email
- Set the Global Preference in:  
Resp: Workflow Administrator Web (New)  
Nav: => Administration : Workflow Configuration : Global Preferences

Enter the Workflow Business Event System Name and System Processing Status.

\* System Name

This is the system name of the database where this instance of Oracle Workflow is installed.

\* Status

---

### Global Preferences

The following preferences are set as default values for all new users.

\* Notification Style    
Regardless of which Notification Style is selected.

Browser Signing DLL Location

---

### Workflow Status Monitor Diagram

\* Workflow Status Monitor Diagram Size

---

### Notification Response

Defer Notification Response Processing for Item Types    
All - All Item Types. None - No Item Types. Specific - Choose Item Types.

# Workflow Notification User Preferences

- Click on the gear icon in the top nav bar
- Scroll down to Notifications and pick a style



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TIP Please enter your old and new passwords. Passwords are case sensitive.

### Delivery Manager e-mail server credentials

e-Mail username

e-Mail password

### Start Page

Responsibility  ▼

Page  ▼

### Notifications

Email Style

- Disabled
- Do not send me mail
- HTML mail
- HTML mail with attachments**
- HTML summary mail
- Plain text mail
- Plain text mail with HTML attachments
- Plain text summary mail

Language, American English.

# Workflow Notifications

## Notification Styles

- Plain text mail
- **HTML mail with attachments**
- HTML mail
- Plain text mail with HTML attachments
- Do not send me mail
- HTML summary mail
- Plain text summary mail
- Disabled
  
- Important MOS Notes:  
Workflow Java Mailer & Notifications FAQ (Doc ID 562551.1)  
Workflow Notification Email Preference is Disabled: How to Troubleshoot and Repair (Doc ID 1326359.1)



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# Signed Notification Replies

- Notifications can require that a user's response be signed by a password-based signature or a certificate-based digital signature
- This is typically only required where government or industry regulations require a higher level of certainty that the approver is in fact that specific individual



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# Workflow Notifications

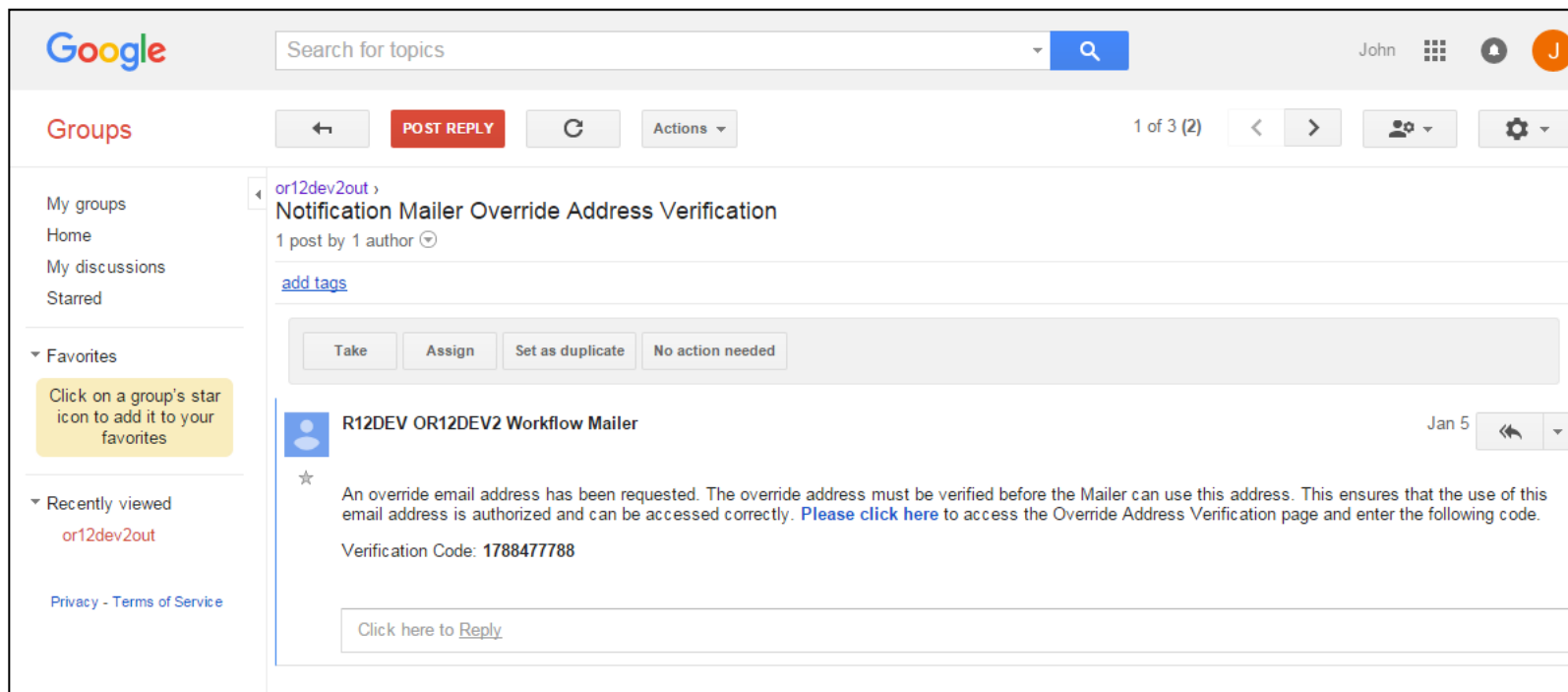
- In Non-Production Environments it is very important to set a Notification Mailer Override Email Address
- This will send all emails to a single mailbox, keep them one mailbox per environment
- Grant all Non-Prod testers access to this mailbox
- You can tell who the email was originally sent to in the email to address
- Make sure to configure the inbox so you EBS environment can process responses
- MOS Note:  
How Does One Set Oracle Workflow Override Address After A Clone. (Doc ID 1623032.1)
- You can send these emails to GMAIL, MOS Note:  
Configuring Oracle E-Business Suite Workflow Mailer with TLS for Microsoft Office365, Gmail, or Cloud Based Email Services for 12.1.3 and 12.2 (Doc ID 2051827.1)

# Workflow Notifications

- When you set an Override Email Address you must respond to an email to verify that you intended to use that email address for all communication.



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The screenshot shows a Google Groups interface. At the top, there's a search bar and user profile information. Below that, a navigation menu includes 'My groups', 'Home', 'My discussions', and 'Starred'. A 'Favorites' section contains a yellow callout box: 'Click on a group's star icon to add it to your favorites'. Under 'Recently viewed', 'or12dev2out' is listed. The main content area shows a notification from 'or12dev2out' titled 'Notification Mailer Override Address Verification'. It includes a 'POST REPLY' button and a '1 of 3 (2)' indicator. The notification text reads: 'R12DEV OR12DEV2 Workflow Mailer' dated 'Jan 5'. The body of the email states: 'An override email address has been requested. The override address must be verified before the Mailer can use this address. This ensures that the use of this email address is authorized and can be accessed correctly. Please click here to access the Override Address Verification page and enter the following code. Verification Code: 1788477788'. At the bottom of the notification, there is a 'Click here to Reply' button.

# Notification Customization



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# Common Notification Changes



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- The most common notification change is to add data elements to the notification so the approver has enough information in the notification that they can make a decision without having to log in somewhere else to perform additional research
- Some elements on the notification come from the Notification Template, MOS Note: How To Change The Message Template, Remove the Approve & Reject Links, and Hide Request More Information Buttons from a Workflow E-mail Notification (Doc ID 302214.1).

# Notification Elements



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- Notifications are composed of Workflow Attributes and optionally OA Framework Regions
- They also can have attachments, which are links to EBS data elements and in future releases will actually be an attachment object in the email

# 1 - How to Make Notification Changes



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- First see if the region is an OA Framework Region that can be personalized
- Make sure the notification mailer is rendering the page properly
- MOS Note:  
How to set the %AGENT% Profile Options correctly to use Workflow Notifications with Framework Content Regions when Advanced Configuration settings have been implemented in the Oracle Application environment? (Doc ID 1943176.1)

After Upgrade To R12.2.3 Requisition Approval Notification Does Not Show Requisition Lines (Doc ID 1614865.1)



## 2 - How to Make Notification Changes

- If that did not work you will need to open the Workflow Builder and customize the Notification in the Workflow Process.
- This will require a developer resource.



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# Existing Workflow Attributes

- See if an existing Workflow Attribute exists.
- Resp: Workflow Administrator Web (New)  
Nav: => Status Monitor
- Query up Workflow Item
- Scroll down to Workflow Attributes
- Text/Numeric/Date Attributes hold an actual value that can be displayed
- Document Attributes call a PL/SQL procedure to build the message content

Status Monitor > Monitor Search >  
**Monitor Workflow Details: ASOAPPRV, 10252DET, 10252DET**

View Process Hierarchy

Expand All | Collapse All

Focus	Process Name	Status	Workflow Type	Item Key	User Key	Owned By	Started	Completed
	INDIVIDUAL_APPROVAL	✓ Complete	ASO Approval	10252DET	10252DET		29-Jun-2015 16:09:12	30-Jun-2015 09:56:16

Workflow Type ASO Approval Started 29-Jun-2015 16:09:12  
 Status Complete Completed 30-Jun-2015 09:56:16

**Workflow Definition**

Internal Name ASOAPPRV  
 Description  
 Persistence Type Temporary  
 Persistence Days 0  
 Selector

**Workflow Attributes**

RECEIVER\_DISPLAYNAME Riel, Kerry  
 RECEIVER\_USERNAME Riel, Kerry  
 REQUESTOR\_DISPLAYNAME Gilliland, Michelle  
 REQUESTOR\_USERNAME Gilliland, Michelle  
 NOTE  
 APPROVALID 10185  
 APPROVAL\_OBJECT 06468-Master Agreement-0-0-0  
 APPROVAL\_DET\_ID 10252  
 REQUEST\_CANCELLOR\_USERNAME  
 REQUEST\_CANCELLOR\_DISPLAYNAME  
 MESSAGE REQUEST\_APPROVED\_FYI  
 NOTIFICATION\_ID 10094617  
 SEND TO  
 RULE\_DETAILS\_DOC PLSQL:ASO\_APR\_WF\_PVT.RULE\_DETAILS\_DOC/ASOAPPRV:&APPROVALID  
 REQUESTER\_COMMENTS\_DOC PLSQL:ASO\_APR\_WF\_PVT.REQUESTER\_COMMENTS\_DOC/ASOAPPRV:&APPROVALID  
 APPROVER\_DETAILS\_DOC PLSQL:ASO\_APR\_WF\_PVT.APPROVER\_DETAILS\_DOC/ASOAPPRV:&APPROVALID  
 QUOTE\_SUMMARY\_DOC PLSQL:ASO\_APR\_WF\_PVT.QUOTE\_SUMMARY\_DOC/ASOAPPRV:&APPROVALID



# Correct Method to Modify Notification

- The Workflow Message holds the Subject Line, Body, Attributes and Static Text, this is what you consider the actual message content.
- The Workflow Message is not versioned, you must make a copy of the Message first. *If you don't you will get errors in existing Workflow Processes that don't have the Attribute defined in them.*
- The Workflow Notification Activity references a Workflow Message and is versioned. You can change a Workflow Notification, but it is usually safer to copy an existing one and make changes in the copy.



# Adding a Workflow Attribute



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- You will use the desktop tool Workflow Builder.
- Where to download Workflow Builder, MOS Note: How To Download and Install the Latest Oracle Workflow Builder (Client Tool) and XML Gateway Message Designer for E-Business Suite (Doc ID 261028.1)
- You can add a custom Workflow Attribute.
- You will need to customize the Process to include a step to initialize or set the Workflow Attribute.
- You can reference the Workflow Attribute in a new/copied Workflow Message
- You can reference the Workflow Message in a new/copied Workflow Notification activity



# Workflow Document Type Attributes



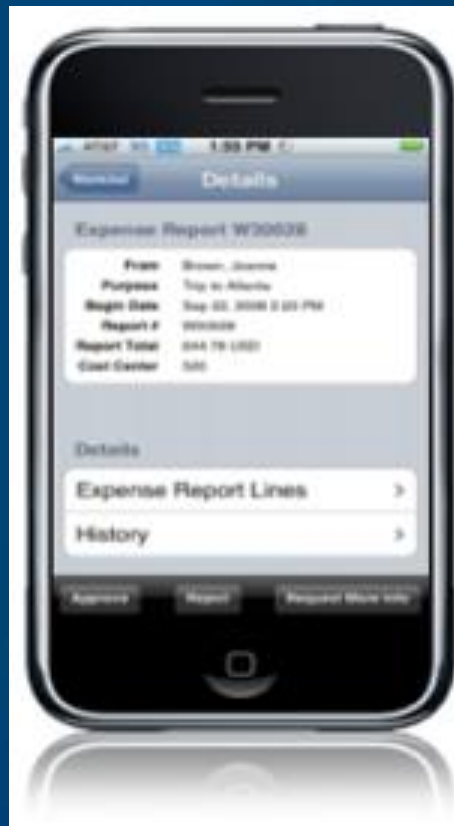
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- Document Type Attributes open up a whole world for custom Workflow Notification development
- Anything you can create in PL/SQL can be called dynamically at run time to build the Workflow Notification content
- This is a more advanced topic but take a look at the references at the end of this presentation for additional details.



# Mobile Approvals Application



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# Mobile Approvals Application



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- A native iOS/Android application that communicates back to the EBS Applications Tier and seamlessly provides users with Approval Notifications on their mobile device.
- No additional license required.  
If you are licensed for a module that uses this you can use it without an additional license.
- Check the note below for supported applications modules and Approval Types. Not all Approval Types are supported. MOS Note: Oracle Mobile Approvals for Oracle E-Business Suite Release Notes (Doc ID 1642423.1)



# Mobile Applications Framework



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- One of many Mobile Applications released for EBS  
MOS Note: Oracle E-Business Suite Mobile Apps,  
Release 12.1 and 12.2 Documentation Index (Doc ID  
1641772.1)
- Also custom Mobile Applications development opened  
up using Mobile Applications Framework (MAF), MOS  
Note: Oracle E-Business Suite Mobile Foundation  
Release Notes (Doc ID 1642431.1)



# Technology



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- This uses the existing REST services in the Oracle EBS Applications Tier. (HTTPS/XML/JSON)
- Installations is just a patch to install the mobile application in the EBS. (12.1.3 and 12.2.3 on)
- Users download mobile application on Apple Apps Store or Google Play Store, search for 'Oracle EBS America'.
- You can also distribute this using Enterprise Distribution, handy for:
  - Using Oracle Mobile Security Suite to manage devices
  - If you have branded the Mobile Application for your organization
  - You want additional control over versions deployed
  - Custom MAF applications

# Technical Architecture Options

1. Use existing EBS Applications Tier server
2. VPN on smartphone
3. Setup EBS DMZ Applications Tier server
4. Oracle Mobile Security Suite's (OMSS) Mobile Security Access Suite (MSAS) on the DMZ Applications Tier server and containerize EBS Smartphone Apps



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# Technical Architecture Options



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Option	Internal External	DMZ Tier	License Implication	Single pwd Multiple Apps	Remote Device Control
Existing EBS Apps Tier	Internal Only	No	No	No	No
VPN on smartphone	Both	No	No	No	No
EBS DMZ Apps Tier	Both	Yes	Possibly	No	No
Oracle Mobile Security Suite's	Both	Yes	Yes	Yes	Yes



# Archive of Approvals for Audit Purposes



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# Approval History Saved

- Some EBS modules store the approval history in tables within that module:
  - PO Approvals
  - Requisition Approvals
  - GL Approvals
- There are more, please verify that in your environment (release and patch level) that the business process areas you require later approval audit capability has the required data after you have purged the workflow data



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# Approval History Not Saved

- Some EBS modules do not store the approval history, they rely on the Workflow tables to hold that approval history.
  - When the Workflow Item is purged the approval history will be purged as well
  - You need to run Workflow purges in order to maintain Workflow performance
  - No easy way to archive the Workflow table data prior to purging
- Examples:
  - ECO Approvals
- However, there is another way to accomplish saving this data.....more on that in a minute.



# Log Enhancement Request

- If this is important to your organization please log an Enhancement Request with Oracle Support
- This should be logged against the functional group for the module in question
- It should not be logged against the Application Object Library (Workflow) group
- This is not a basic Workflow Functionality gap
- It is a gap in how the tool was used by the functional team within Oracle Development



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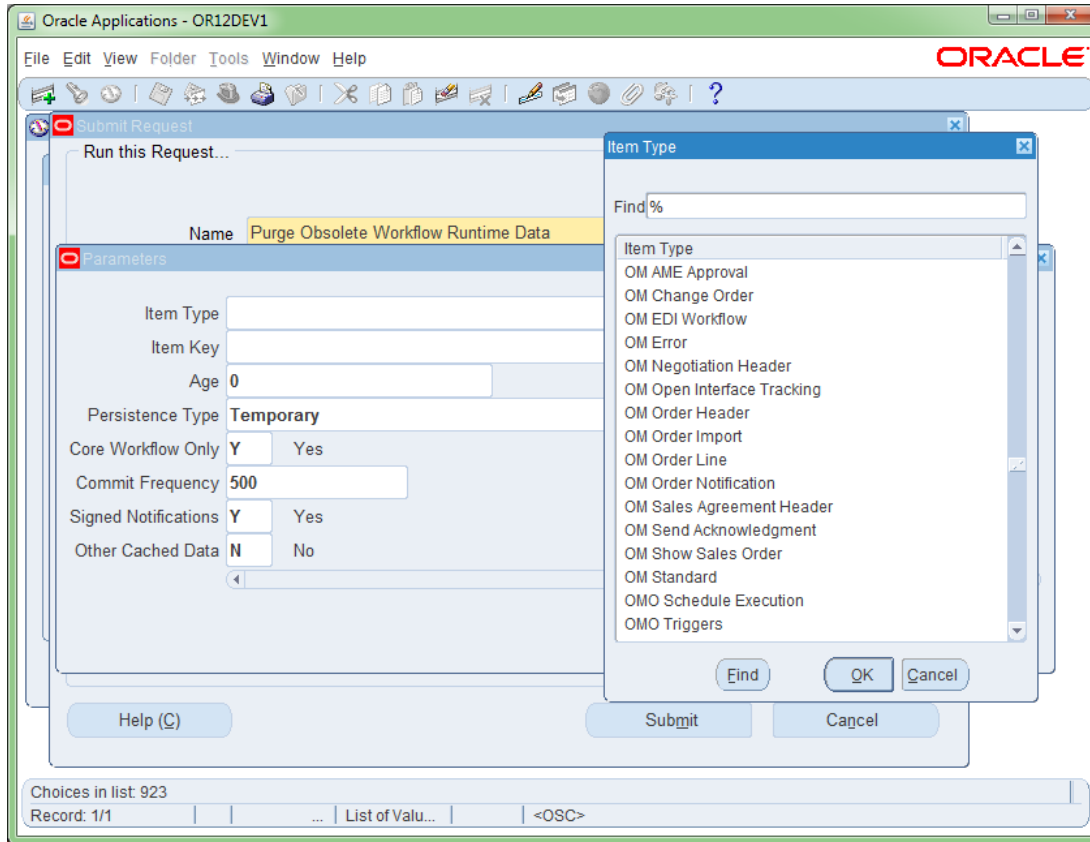
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# Selectively Purge Workflows

# Workflow Purge

- We MUST run the 'Purge Obsolete Workflow Runtime Data' program



- Signed Notifications** (default N): Choosing Y causes the electronic signature information associated with purged **notifications** to also be purged.





# Workflow Purge

- Selectively purge Workflow Run Time Data, but this is not a 100% solution
- You can run the Workflow Purge by Item Type
  - There are over 920 Item Types, in your environment probably less than 2 dozen are actively used
  - You will need to know all of the Item Types in your environment

```
select t1.DISPLAY_NAME,  
       t.NAME,  
       t.PERSISTENCE_TYPE,  
       count (*)  
from   WF_ITEM_TYPES_TL t1,  
       WF_ITEM_TYPES t,  
       WF_ITEMS i  
where  t.NAME = t1.NAME  
       and i.ITEM_TYPE = t.NAME  
group by t1.DISPLAY_NAME,  
         t.NAME,  
         t.PERSISTENCE_TYPE  
order by 1;
```

- MOS Note:  
FAQ on Purging Oracle Workflow Data (Doc ID 277124.1)





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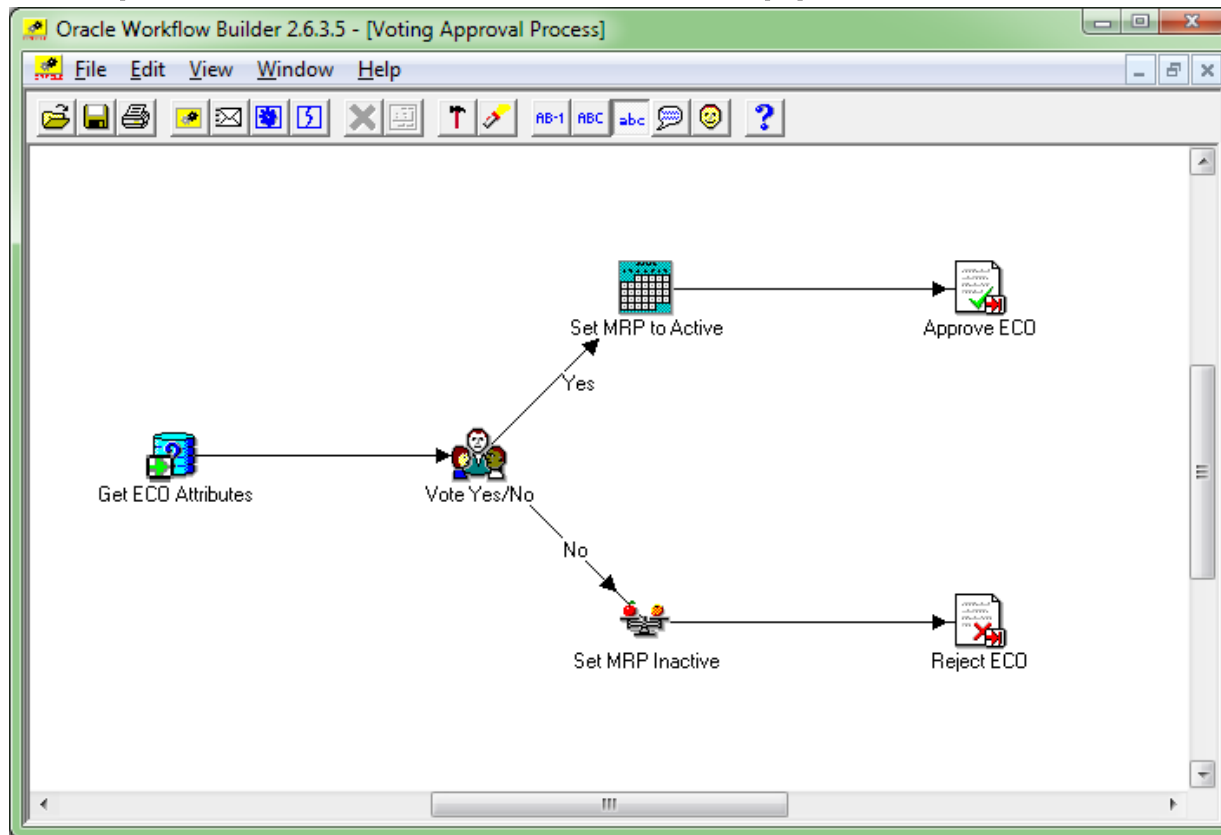


# Customize Workflow to Save Approvals



# Customization to Archive Approvals

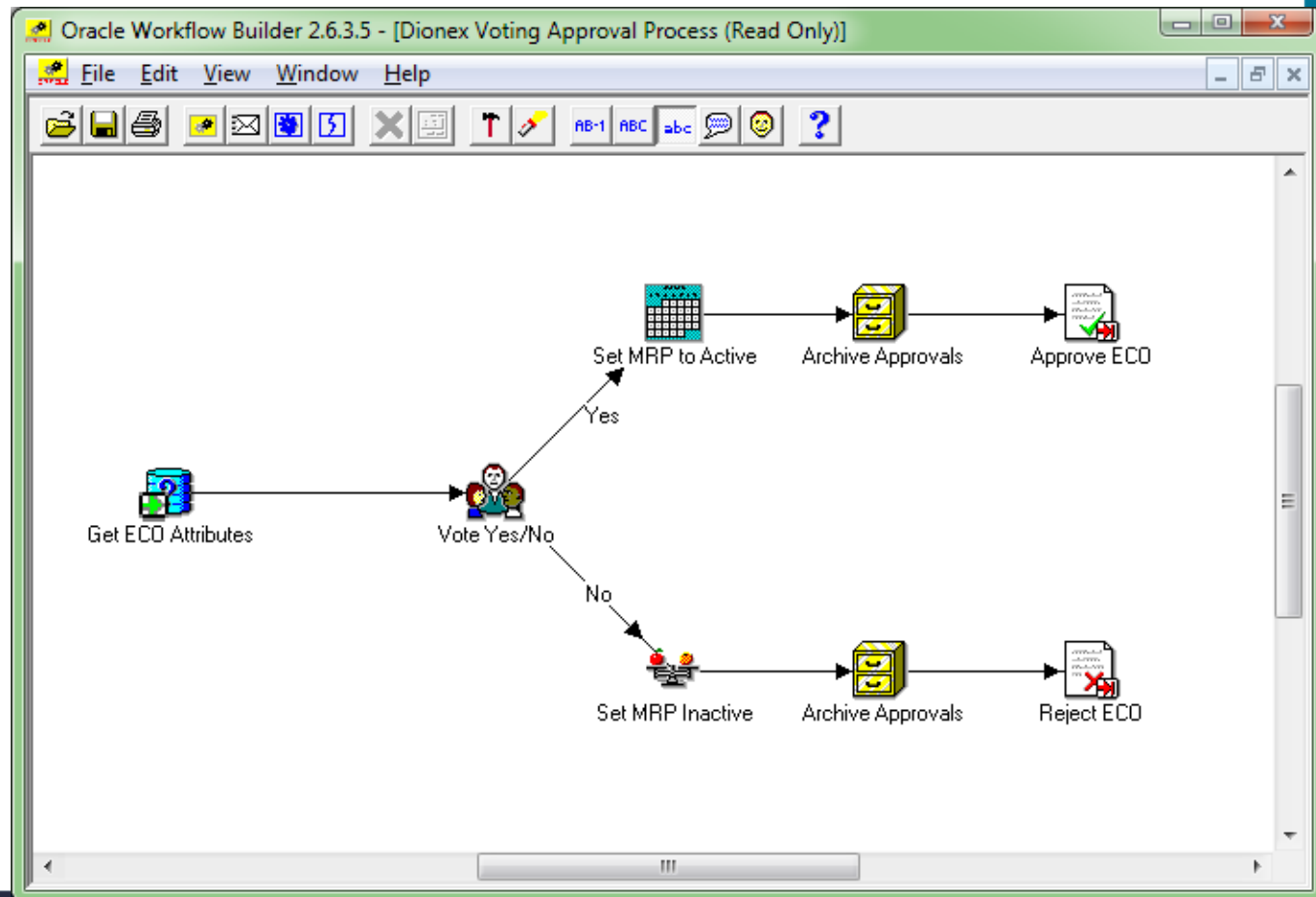
- This example is based on the ECO Approval Workflow. This is a nice simple approval process to show the concepts which can be applied to even the most complete seeded Workflow Approval Process.





# Customization Archive Approvals

- Insert custom Workflow Functions to archive approval results to a custom table
- Can be placed anywhere after the Notification



# Archive Approvals Functions

- Implemented as a PL/SQL Procedure
- Queries WF\_ITEM\_ACTIVITY\_STATUSES where the Activity is an Approval Activity
- Query the Process Activity to get the Approver and Result
- Store the Approver and Result into a custom table



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# Custom Tables



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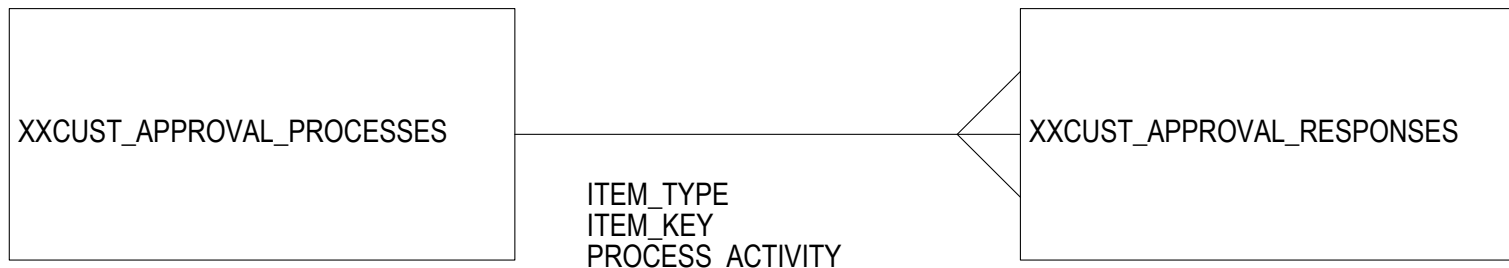


## XXCUST\_APPROVAL\_PROCESSES

- This table stores the high level workflow process information that is pulled from the tables WF\_ITEMS and WF\_ITEM\_ACTIVITY\_STATUSES

## XXCUST\_APPROVAL\_RESPONSES

- This stores the actual approval responses from the user community. This data is primarily pulled from the WF\_NOTIFICATIONS table.



# Custom Tables

- **XXCUST\_APPROVAL\_PROCESSES**

ITEM_TYPE	VARCHAR2(8) not NULL,
ITEM_KEY	VARCHAR2(240) not NULL,
USER_KEY	VARCHAR2(240) not NULL,
ROOT_ACTIVITY	VARCHAR2(30) not NULL,
ROOT_ACTIVITY_VERSION	NUMBER not NULL,
PROCESS_ACTIVITY	NUMBER not NULL,
ACTIVITY_STATUS	VARCHAR2(30),
ACTIVITY_RESULT_CODE	VARCHAR2(8),
BEGIN_DATE	DATE,
END_DATE	DATE,
PROCESS_NOTIFICATION_ID	NUMBER,
ASSIGNED_USER_DISPLAY_NAME	VARCHAR2(360),
CREATION_DATE	DATE default SYSDATE,
CREATED_BY	NUMBER,
LAST_UPDATE_DATE	DATE default SYSDATE,
LAST_UPDATED_BY	NUMBER,
LAST_UPDATE_LOGIN	NUMBER,
PROGRAM_APPLICATION_ID	NUMBER,
PROGRAM_ID	NUMBER,
PROGRAM_UPDATE_DATE	DATE,
REQUEST_ID	NUMBER



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# Custom Tables



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- **XXCUST\_APPROVAL\_RESPONSES**

ITEM_TYPE	VARCHAR2(8) not NULL,
ITEM_KEY	VARCHAR2(240) not NULL,
PROCESS_ACTIVITY	NUMBER not NULL,
GROUP_ID	NUMBER not NULL,
NOTIFICATION_ID	NUMBER not NULL,
RECIPIENT_ROLE	VARCHAR2(320) not NULL,
MESSAGE_NAME	VARCHAR2(30) not NULL,
STATUS	VARCHAR2(8) not NULL,
USER_COMMENT	VARCHAR2(4000),
BEGIN_DATE	DATE,
END_DATE	DATE,
RESULT	VARCHAR2(4000)



# Customization to Archive Approvals

- This is not a huge customization effort, but you have to repeat for each Workflow Process you require this in.
- You can make this fairly generic to handle multiple Item Types.
- However this is a customization to the workflow processes.
- This will require maintenance as you patch and upgrade.



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# References

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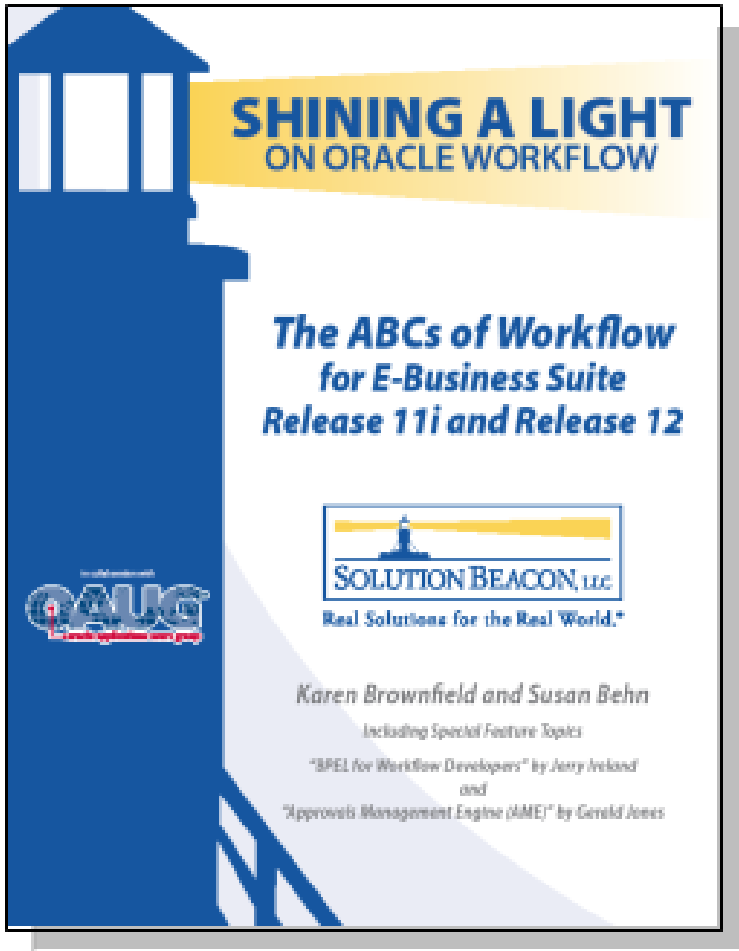


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# Karen Brownfields reference book on Workflow



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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



# Web Sites

- My Web Site and Past Presentations  
<http://jrpjr.com>
- OAUG Workflow SIG  
<http://workflowsig.communities.oaug.org/>
- Infosemantics Presentations  
<http://www.infosemantics.com/presentations/>



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# Oracle Web Sites



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- **Workflow Blog**

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

Great information on using GMAIL SMTP and IMAP servers

- **Information Center: E-Business Suite Oracle Workflow (WF) (Doc ID 1320509.2)**

- **My Oracle Support Community**

[https://community.oracle.com/community/support/oracle\\_e-business\\_suite/core\\_workflow](https://community.oracle.com/community/support/oracle_e-business_suite/core_workflow)

- **Integration Blog**

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

# Workflow Analyzer



- This is a non-invasive SQL Script you can run against your system it will provide some very good information to help you manage the workflow product.
- MOS Note: EBS Workflow (WF) Analyzer (Doc ID 1369938.1)



**Workflow Analyzer for VIS on HANDARGE-PC.US.ORACLE.COM**

**ORACLE PREMIER SUPPORT GET PROACTIVE!**

*WF Analyzer v4.05 compiled on: 18-APR-2012 05:40:2*

This Workflow Analyzer script reviews the current environment, providing helpful feedback and recommendations.

**Table of Contents**

**Workflow Analyzer Overview**

- E-Business Suite Version
- Workflow Database Parameter Settings

**Workflow Administration**

- Verify the Workflow Administrator Role
- SYSADMIN User Setup for Error Notifications
- SYSADMIN Worklist Access
- SYSADMIN Notification Routing Rules
- Verify AutoClose\_TVI Setting
- E-Business Suite Profile Settings
- Workflow Profile Settings
- Verify Error Messages
- Verify #STUCK Activities
- Totals for Notification Preferences
- Check the Status of Workflow Services

**Workflow Footprint**

- Volume of Workflow Runtime Data Tables
- Verify Closed and Purgeable TEMP Items
- SUMMARY of Workflow Processes by Item Type
- Check the Volume of Open and Closed Items
- Average Volume of Opened Items in the past
- Total OPEN Items Started Over 90 Days Ago
- Check Top 30 Large Item Activity Status History

**Workflow Runtime Data Table Gauge**

**Your overall Workflow HealthCheck**

The WF\_ITEMS Table has obsolete workflow runtime data that should be purged.

We reviewed all 18,569 rows in WF\_ITEMS Table for Closed Items. Currently 82% ( 15,216) of WF\_ITEMS are OPEN, while 18% ( 3,353) are CLOSED.

**Note:** Once a Workflow is closed, its runtime data that is stored in the WF\_ITEMS table is not purged. All the pertinent data is stored in the functional tables (FND\_ITEM\_ACTIVITY\_STATUSES, FND\_ITEM\_ACTIVITY\_STATUSES\_H, FND\_ITEM\_ATTRIBUTE\_VALUES, FND\_NOTIFICATIONS). Remember that each row in WF\_ITEMS is associated to 1000s of rows in the functional tables.

**E-Business Suite Version**

SID	RELEASE	HOSTNAME	STARTED
VIS	11.5.10.2	handarge-pc.us.oracle.com	20-FEB-2012 16:37:23

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**Workflow Database Parameter Settings**

NAME	VALUE
cpu_count	2
nls_language	american
nls_territory	america
tmp_dir	/usr/tmp, /usr/tmp, /usr/tmp
job_queue_processes	2
parallel_threads_per_cpu	2
mq_tm_processes	1

**SYSADMIN User Setup for Error Notifications**

**Warning:** The SYSADMIN User appears to be setup to not receive email notifications! This is fine. However, this means SYSADMIN can only access notifications through the Oracle Workflow Mailer. Please verify that the SYSADMIN User is actively processing the 19,413 Error Notifications that are currently in the WF\_ITEMS table. Please review System Administration Setup Tasks in the [Oracle Applications System Administrator's Guide](#).

**Show the status of the Workflow Error Notifications for this instance**

**Workflow Error Notifications by Type**

**Looking at major Error Notification Types**

**Attention:** There are 19,679 Error Notifications of type (ECKERROR,OMERROR,POERROR,WFERROR) found. Please review the following table to better understand the volume and status for these Error Notifications. Please review [Note 760386.1](#) - How to enable Bulk Notification Response Processing for Workflows.

**Summary of Error Message Recipients (WFERROR, POERROR, OMERROR, ECKERROR)**

NAME	DISPLAY_NAME	STATUS	PREFERENCE	EMAIL	TYPE
SYSADMIN	SYSADMIN	ACTIVE	QUERY		WFERROR
SYSADMIN	SYSADMIN	ACTIVE	QUERY		OMERROR
USER_A	USER_A	ACTIVE	MAIL/HTML		WFERROR
USER_A	USER_A	ACTIVE	MAIL/HTML		WFERROR
SSCFR	Saint-Gratien, Christiane	ACTIVE	MAIL/HTML		POERROR

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**Worklist Access**

The Oracle Workflow Advanced Worklist allows you to grant access to your worklist. That user can then act as your proxy to handle the notifications in your list on your behalf. This feature lets you grant access to continue indefinitely. The worklist access feature lets you allow other privileges or responsibilities that you have in Oracle Applications.

**Workflow Footprint**

**Workflow Runtime Data Tables**

**Warning:** The Workflow Runtime Tables logical space which is used for all full-table scans is 39% greater than the physical or actual tablespace being used. It is recommended to have a DBA resize these tables to reset the HighWater Mark. There are several ways to coalesce, drop, recreate these workflow runtime tables. Please review [Note 388672.1](#) - How to Reorganize Workflow Tables, for more details on ways to do this.

**Volume of Workflow Runtime Data Tables (in Megabytes)**

Workflow Table Name	Logical Table Size	Physical Table Data	Difference
WF_COMMENTS	15	11	5
WF_DIG_SIGS	0	0	0
WF_ITEMS	13	9	4
WF_ITEM_ACTIVITY_STATUSES	146	62	84
WF_ITEM_ACTIVITY_STATUSES_H	32	19	13
WF_ITEM_ATTRIBUTE_VALUES	780	494	286
WF_NOTIFICATIONS	92	42	10
<b>TOTALS</b>	<b>1040</b>	<b>637</b>	<b>404</b>

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# Questions and Comments?



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