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Oracle Workflow: Oracle E-Business Suite R12 Updates

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Oracle Workflow: Oracle E-Business Suite R12 Updates

- Agenda
 - New features in Release 12
 - Usability
 - Access control
 - Performance
 - Diagnostics
 - Maintaining a healthy Workflow environment.
 - Monitoring background processes
 - Purging
 - Diagnosing Issues
 - Troubleshooting help
 - Q & A

The Worklist - Usability

- The center of all things Workflow
 - Good, but not good enough

ORACLE Workflow

Diagnostics Home Logout Preferences Help

Worklist

View

Select Notifications:

[Select All](#) | [Select None](#)

Select	From	Type	Subject	Sent	Due
<input type="checkbox"/>	Stock, Pat	Expenses	Expense W29152 for Stock, Pat (1,191.00 USD)	19-Oct-2006	24-Oct-2006
<input type="checkbox"/>	Stock, Pat	Expenses	Expense W29126 for Stock, Pat (1,210.00 USD)	16-Oct-2006	21-Oct-2006
<input type="checkbox"/>	Stock, Pat	Expenses	Expense W29125 for Stock, Pat (2,296.00 USD)	16-Oct-2006	21-Oct-2006
<input type="checkbox"/>	Jones, Kerry	PO Requisition Approval	Purchase Requisition 13931 for Jones, Kerry (665.50 USD)	16-Oct-2006	
<input type="checkbox"/>	Jones, Kerry	Expenses	Expense W29123 for Jones, Kerry (600.00 USD)	16-Oct-2006	21-Oct-2006
<input type="checkbox"/>	Stock, Pat	PO Requisition Approval	Purchase Requisition 13930 for Stock, Pat (13,750.00 USD)	16-Oct-2006	
<input type="checkbox"/>	Stock, Pat	Expenses	Expense W29121 for Stock, Pat (2,206.00 USD)	16-Oct-2006	21-Oct-2006
<input type="checkbox"/>	Stock, Pat	PO Requisition Approval	Purchase Requisition 13929 for Stock, Pat (390,000.00 USD)	16-Oct-2006	
<input type="checkbox"/>	Jones, Kerry	Expenses	Expense W29111 for Jones, Kerry (100.00 USD)	16-Oct-2006	21-Oct-2006
<input type="checkbox"/>	Brown, Ms. Casey	PO Approval	Standard Purchase Order 5362 has been approved	09-Aug-2006	
<input type="checkbox"/>	Brown, Ms. Casey	PO Approval	Standard Purchase Order 5305 has been approved	09-Jun-2006	
<input type="checkbox"/>	Brown, Ms. Casey	PO Approval	Standard Purchase Order 5224 has been approved	10-Apr-2006	
<input type="checkbox"/>	Marlin, Ms. Amy	PO Approval	Vision Services - Standard Purchase Order 3396 for USD requires your approval.	28-Feb-2006	

Select Notifications:

[TIP Vacation Rules](#) - Redirect or auto-respond to notifications.
 [TIP Worklist Access](#) - Specify which users can view and act upon your notifications.

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Worklist Flexfield & Custom Views

- Customer pain points
 - Users are required to drill down to the notification to view specific message attributes
 - No ability to sort based on Message Attributes
- Workflow Flexfields
 - Administrators can enable Message Attributes to be displayed in the Worklist
 - Administrators can secure the personalized view with a securing function & grant access to specific users
 - Users can sort on attributes promoted to the Worklist

Notification Worklist Custom View

ORACLE[®] Workflow User Web (New) Diagnostics Home Logout Preferences Help

Worklist Simple Search

View: **Open Notifications**

Select: All Notifications
Select: Expenses
Select: FYI Notifications
 Notifications From Me
 Open Notifications
 Requisition
 To Do Notifications

			Subject	Sent	Due
<input type="checkbox"/>			Expense W29111 for Jones, Kerry (100.00 USD)	16-Oct-2006	21-Oct-2006
<input type="checkbox"/>			Expense W29116 for Stock, Pat (1,180.00 USD)	16-Oct-2006	21-Oct-2006
<input type="checkbox"/>	Stock, Pat	Expenses	Expense W29117 for Stock, Pat (2,900.00 USD)	16-Oct-2006	21-Oct-2006
<input type="checkbox"/>	Stock, Pat	Expenses	Expense W29118 for Stock, Pat (2,200.00 USD)	16-Oct-2006	21-Oct-2006
<input type="checkbox"/>	Stock, Pat	Expenses	Expense W29120 for Stock, Pat (1,180.00 USD)	16-Oct-2006	21-Oct-2006
<input type="checkbox"/>	Stock, Pat	Expenses	Expense W29121 for Stock, Pat (2,206.00 USD)	16-Oct-2006	21-Oct-2006
<input type="checkbox"/>	Stock, Pat	Expenses	Expense W29122 for Stock, Pat (2,921.00 USD)	16-Oct-2006	21-Oct-2006
<input type="checkbox"/>	Jones, Kerry	Expenses	Expense W29123 for Jones, Kerry (600.00 USD)	16-Oct-2006	21-Oct-2006
<input type="checkbox"/>	Stock, Pat	PO Requisition Approval	Purchase Requisition 13929 for Stock, Pat (390,000.00 USD)	16-Oct-2006	
<input type="checkbox"/>	Stock, Pat	PO Requisition Approval	Purchase Requisition 13930 for Stock, Pat (13,750.00 USD)	16-Oct-2006	
<input type="checkbox"/>	Jones, Kerry	PO Requisition Approval	Purchase Requisition 13931 for Jones, Kerry (665.50 USD)	16-Oct-2006	
<input type="checkbox"/>	Brown, Ms. Casey	PO Approval	Standard Purchase Order 5224 has been approved	10-Apr-2006	
<input type="checkbox"/>	Brown, Ms. Casey	PO Approval	Standard Purchase Order 5305 has been approved	09-Jun-2006	
<input type="checkbox"/>	Brown, Ms. Casey	PO Approval	Standard Purchase Order 5362 has been approved	09-Aug-2006	
<input type="checkbox"/>	Marlin, Ms. Amy	PO Approval	Vision Services - Standard Purchase Order 3396 for USD requires your approval.	28-Feb-2006	

Select Notifications:

TIP [Vacation Rules](#) - Redirect or auto-respond to notifications.
 TIP [Worklist Access](#) - Specify which users can view and act upon your notifications.

Custom View for Requisitions

Custom Requisition View

Total & Description promoted to Worklist

ORACLE[®] Workflow User Web (New)

[Diagnostics](#) [Home](#) [Logout](#) [Preferences](#) [Help](#)

Worklist


[Simple Search](#)

View

Select Notifications:

[Select All](#) | [Select None](#)

Select	From	Subject ▲	Total	Description	Sent	Due
<input type="checkbox"/>	Stock, Pat	Purchase Requisition 13929 for Stock, Pat (390,000.00 USD)	390,000.00 USD	Weekly Warehousing	16-Oct-2006	
<input type="checkbox"/>	Stock, Pat	Purchase Requisition 13930 for Stock, Pat (13,750.00 USD)	13,750.00 USD	Paper - requires 2-way match office supply item	16-Oct-2006	
<input type="checkbox"/>	Jones, Kerry	Purchase Requisition 13931 for Jones, Kerry (665.50 USD)	665.50 USD	CROSS ELD472-10 Morph DigiWriter Duo Pen	16-Oct-2006	

 [TIP Vacation Rules](#) - Redirect or auto-respond to notifications.

 [TIP Worklist Access](#) - Specify which users can view and act upon your notifications.

[Diagnostics](#) [Home](#) [Logout](#) [Preferences](#) [Help](#)

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Custom View for Expense Reports

Custom View

Total & Purpose promoted to Worklist

ORACLE[®] Workflow User Web (New) Diagnostics Home Logout Preferences Help

Worklist Simple Search

View: Expenses Go Personalize

Select Notifications: Open Reassign

[Select All](#) | [Select None](#)

Select	From	Subject [▲]	Cost Center	Total	Purpose	Sent	Due
<input type="checkbox"/>	Jones, Kerry	Expense W29111 for Jones, Kerry (100.00 USD)	520	100.00 USD	OPEn World	16-Oct-2006	21-Oct-2006
<input type="checkbox"/>	Stock, Pat	Expense W29116 for Stock, Pat (1,180.00 USD)	740	1,180.00 USD	Conference	16-Oct-2006	21-Oct-2006
<input type="checkbox"/>	Stock, Pat	Expense W29117 for Stock, Pat (2,900.00 USD)	740	2,900.00 USD	Conference	16-Oct-2006	21-Oct-2006
<input type="checkbox"/>	Stock, Pat	Expense W29118 for Stock, Pat (2,200.00 USD)	740	2,200.00 USD	Conference	16-Oct-2006	21-Oct-2006
<input type="checkbox"/>	Stock, Pat	Expense W29120 for Stock, Pat (1,180.00 USD)	740	1,180.00 USD	Conference	16-Oct-2006	21-Oct-2006
<input type="checkbox"/>	Stock, Pat	Expense W29121 for Stock, Pat (2,206.00 USD)	740	2,206.00 USD	India Development Center	16-Oct-2006	21-Oct-2006
<input type="checkbox"/>	Stock, Pat	Expense W29122 for Stock, Pat (2,921.00 USD)	740	2,921.00 USD	Open World 2006 San Francisco	16-Oct-2006	21-Oct-2006
<input type="checkbox"/>	Jones, Kerry	Expense W29123 for Jones, Kerry (600.00 USD)	520	600.00 USD	Paris conference	16-Oct-2006	21-Oct-2006
<input type="checkbox"/>	Stock, Pat	Expense W29124 for Stock, Pat (2,216.00 USD)	740	2,216.00 USD	India Development Center	16-Oct-2006	21-Oct-2006
<input type="checkbox"/>	Stock, Pat	Expense W29125 for Stock, Pat (2,296.00 USD)	740	2,296.00 USD	India Development Center	16-Oct-2006	21-Oct-2006
<input type="checkbox"/>	Stock, Pat	Expense W29126 for Stock, Pat (1,210.00 USD)	740	1,210.00 USD	Conference	16-Oct-2006	21-Oct-2006

Select Notifications: Open Reassign

[TIP Vacation Rules](#) - Redirect or auto-respond to notifications.
 [TIP Worklist Access](#) - Specify which users can view and act upon your notifications.

Diagnostics Home Logout Preferences Help

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Worklist Proxy Control

- Fine grain proxy control at the User/Document Level
 - Allows granting access to the Worklist to another users
 - Supports granting at the Document Level

The screenshot shows the Oracle Workflow User Web interface for granting worklist access. The page title is "ORACLE® Workflow User Web (New)" with navigation links for "Diagnostics", "Home", "Logout", "Preferences", and "Help". The main heading is "Grant Worklist Access" with a sub-heading "Grant another user access to view and act upon your notifications via the Worklist." and "Cancel" and "Apply" buttons. A note states "* Indicates required field".

Form fields include:

- * Name: A dropdown menu set to "All Employees and Users" and a text input field containing "Stock, Pat".
- Description: An empty text input field.
- * Start Date: A date picker set to "18-Oct-2006" with a calendar icon and a note "(example: 18-Oct-2006)".
- End Date: An empty date picker with a calendar icon.
- Grant Access to: Radio buttons for "All Item Types" and "Selected Item Types", with "Selected Item Types" selected.

Item selection area:

- Available Item Types: A list box containing "EPB Data Collection" and "PO Approval".
- Selected Item Types: A list box containing "Expenses" and "PO Requisition Approval".
- Between the list boxes are buttons: "Move" (single arrow), "Move All" (double arrow), "Remove" (single arrow), and "Remove All" (double arrow).

At the bottom of the form are "Cancel" and "Apply" buttons. The footer contains "About this Page", "Privacy Statement", "Diagnostics Home Logout Preferences Help", and "Copyright (c) 2006, Oracle. All rights reserved."

- User is granting access to Expense and Requisition Approvals
- User is not allowing access to PO Approvals

Secure Enterprise Search Integration

- Worklist data accessible from global applications search

Enterprise Search

[Navigation](#) [Worklist](#)

Apps Search Main Results page

Result Style

Applications Help	
Current as of 18-Oct-2006 00:00:00 Page 1 Results 1-10 Estimated Hits 64 Time Taken 0.537 Secs	
Title	Application Name
Migrating from Personal Time and Expense, Project Time and Expense, and Oracle Internet Time (OTL)	Time and Labor
Entering Expense Reports - Oracle Tutor Document	Application Object Library
Expense Summary (DBI for Financials)	Financial Intelligence
Issue Employee Expense Payments - Special Edition - Role Based Training - Oracle Tutor	Application Object Library
Approving Employee Expense Reports - Oracle Tutor 11i	Application Object Library
Estimate Future Depreciation Expense - Oracle Tutor 11i - OBM 450	Application Object Library
Expense Analysis Dashboard (DBI for Financials)	Financial Intelligence
Reconciling Depreciation Expense Accounts (Oracle Assets)	Assets
Expense Reports - Oracle Tutor 11i	Payables
Determining Expense Report Costs (Oracle Projects Costing)	Projects

1

[More>>](#)

[Navigation](#) [Return to Top](#)

[Worklist](#) [Return to Top](#)

Worklist			
Current as of 18-Oct-2006 00:00:00 Page 1 Results 1-5 Estimated Hits 18 Time Taken 0.527 Secs			
Subject	To User	From User	Begin Date
Expense W29130 for Stock, Pat (1,160.00 USD)	Brown, Casey	Stock, Pat	16-Oct-2006
Expense W29133 for Stock, Pat (1,190.00 USD)			
Expense W29132 for Stock, Pat (1,190.00 USD)	Brown, Casey	Stock, Pat	16-Oct-2006
Expense W29127 for Stock, Pat (1,240.00 USD)	Brown, Casey	Stock, Pat	16-Oct-2006
Expense W29125 for Stock, Pat (2,296.00 USD)	Brown, Casey	Stock, Pat	16-Oct-2006

1

[More>>](#)

- Direct access to Notification detail page

ORACLE E-Business Suite

Expense W29132 for Stock, Pat (1,190.00 USD)

Expense Report for Stock, Pat
Individual's Cost Center 740
Purpose Open World 2006, Moscone Center
Expense Report Total 1,190.00 USD

Instructions
Please approve or reject this expense report. Please provide a note if you reject.

Cash and Other Expenses: Business Expenses

Line	Violation Type	Date	Expense Type	Reimbursable Amount (USD)	Justification	Attachments
1	Credit Card Required	27-Nov-2006	Car Rental	280.00	Car	
2	Credit Card Required	27-Nov-2006	Hotel	850.00	Hotel	
3		27-Nov-2006	Per Diem	60.00	Day expense	
Total				1,190.00		

Previously Submitted Expenses

Num	Action Date	Action	From	To	Details
1	16-Oct-2006 17:18:28	Submit	Stock, Pat	Brown, Casey	
2	18-Oct-2006 10:36:25	Approve	Brown, Casey	Workflow System	

Related Applications
[Expense Report Details](#)
[View Expense Receipts \(130 Systems\)](#)

Response
None

Digital Signatures - Usability

- Ability to digitally sign the entire notification contents, including subject, message body, response attributes, and response action
- Enhancement of the notification purge program to exclude purging of signature-enabled notifications
- Ability to verify the signed documents through an evidence store user interface after the signing process

Digital Signatures – UI over Evidence Store

Digital Signature

Search

Signature Policy	<input type="text" value="Any"/>	Creation Date	<input type="text"/>
Signature Flavor	<input type="text" value="Any"/>		<input type="text" value="(example: 18-Aug-2005 04:51:29)"/>
Notification Id	<input type="text"/>	Signed Date	<input type="text"/>
Requested Signer	<input type="text" value="All Employees and Users"/> <input type="text" value="RAGRAWAL"/>	Verified Date	<input type="text"/>
Status	<input type="text" value="Any"/>	Last Validation Date	<input type="text"/>
	<input type="button" value="Go"/> <input type="button" value="Clear"/>	Validated Complete Date	<input type="text"/>

Signature Policy	Requested Signer	Status	Creation Date	Signed Date
PSIG_ONLY	RAGRAWAL	Authorized	10-Feb-2005 01:00:41	10-Feb-2005 01:00:51
PSIG_ONLY	RAGRAWAL	Authorized	10-Feb-2005 00:50:13	10-Feb-2005 00:50:54
PSIG_ONLY	RAGRAWAL	Authorized	10-Feb-2005 19:40:43	10-Feb-2005 19:40:51
PKCS7X509_ONLY	RAGRAWAL	Authorized	18-Aug-2005 00:32:07	18-Aug-2005 00:32:21
PKCS7X509_ONLY	RAGRAWAL	Requested	18-Aug-2005 00:02:06	
PKCS7X509_ONLY	RAGRAWAL	Verified	18-Aug-2005 00:18:11	18-Aug-2005 00:18:34
PKCS7X509_ONLY	RAGRAWAL	Requested	17-Aug-2005 23:37:53	
PKCS7X509_ONLY	RAGRAWAL	Requested	17-Aug-2005 23:44:34	
PKCS7X509_ONLY	RAGRAWAL	Requested	17-Aug-2005 23:58:44	
PKCS7X509_ONLY	RAGRAWAL	Requested	17-Aug-2005 23:11:05	

Workflow Status Monitor

- Role Based Access Control (RBAC)
 - Used to secure access to Document Types and Work Items

Workflows

Search

Select "Show More Search Options" to search for workflows by activity characteristics.

Workflow Type:

Type Internal Name:
(Example: WFDEMO, WFEERROR)

Workflow Owned By:

[Show More Search Options](#)

Item Key:

User Key:

* Workflow Status:

* Workflow Started:

- Enables administrators to grant access to specific subsets of data
 - Expense processes for financials users
 - Salary processes for HR Users

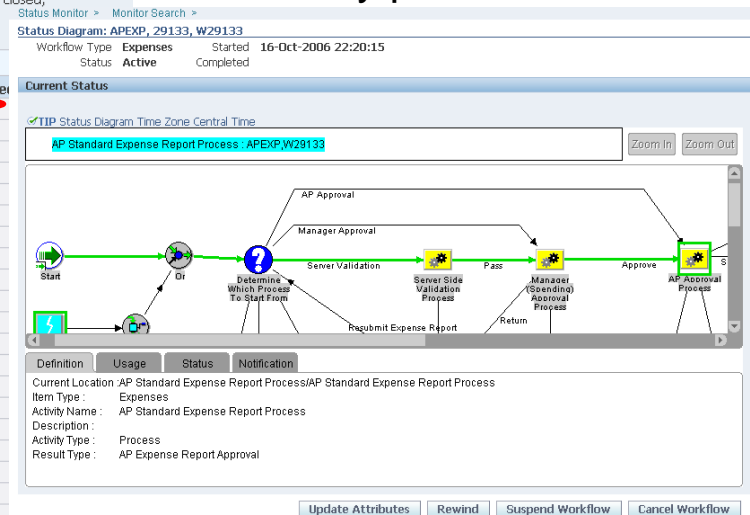
To view or administer a workflow, select "Activity History". Select "Participant Responses" to view comments and other information gathered for closed, response-required notifications.

TIP Workflow histories are periodically purged from the system and may no longer be available for review.

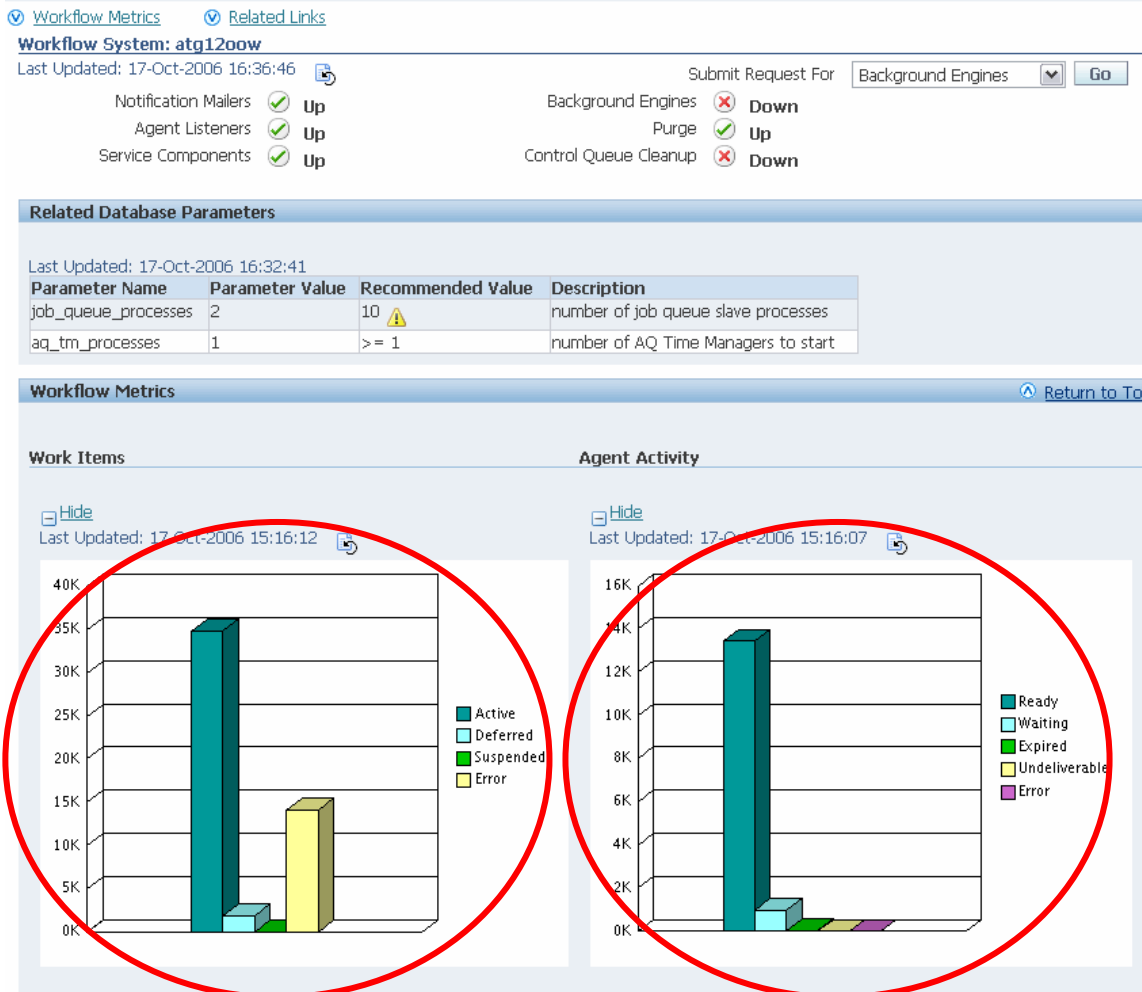
Select Workflow and View...

Select	Status	Workflow Type	Item Key	Process Name	User Key	Owned By	Started	Completed
<input checked="" type="radio"/>	Active	Expenses	29133	AP Standard Expense Report Process	W29133	Stock, Pat	16-Oct-2006 22:20:15	
<input checked="" type="radio"/>	Active	Expenses	29132	AP Standard Expense Report Process	W29132	Stock, Pat	16-Oct-2006 22:18:28	
<input checked="" type="radio"/>	Active	Expenses	29131	AP Standard Expense Report Process	W29131	Stock, Pat	16-Oct-2006 22:16:49	
<input checked="" type="radio"/>	Active	Expenses	29130	AP Standard Expense Report Process	W29130	Stock, Pat	16-Oct-2006 22:14:09	
<input checked="" type="radio"/>	Active	Expenses	29129	AP Standard Expense Report Process	W29129	Stock, Pat	16-Oct-2006 22:10:18	
<input checked="" type="radio"/>	Active	Expenses	29128	AP Standard Expense Report Process	W29128	Stock, Pat	16-Oct-2006 22:09:27	
<input checked="" type="radio"/>	Active	Expenses	29127	AP Standard Expense Report Process	W29127	Stock, Pat	16-Oct-2006 22:08:30	
<input checked="" type="radio"/>	Active	Expenses	29126	AP Standard Expense Report Process	W29126	Stock, Pat	16-Oct-2006 22:07:17	
<input checked="" type="radio"/>	Active	Expenses	29125	AP Standard Expense Report Process	W29125	Stock, Pat	16-Oct-2006 22:05:49	
<input checked="" type="radio"/>	Active	Expenses	29124	AP Standard Expense Report Process	W29124	Stock, Pat	16-Oct-2006 22:03:49	
<input checked="" type="radio"/>	Active	Expenses	29123	AP Standard Expense Report Process	W29123	Jones, Kerry	16-Oct-2006 20:32:27	
<input checked="" type="radio"/>	Active	Expenses	29122	AP Standard Expense Report Process	W29122	Stock, Pat	16-Oct-2006 20:24:28	
<input checked="" type="radio"/>	Active	Expenses	29121	AP Standard Expense Report Process	W29121	Stock, Pat	16-Oct-2006 20:22:19	
<input checked="" type="radio"/>	Active	Expenses	29120	AP Standard Expense Report Process	W29120	Stock, Pat	16-Oct-2006 19:21:29	
<input checked="" type="radio"/>	Active	Expenses	29118	AP Standard Expense Report Process	W29118	Stock, Pat	16-Oct-2006 18:16:25	
<input checked="" type="radio"/>	Active	Expenses	29117	AP Standard Expense Report Process	W29117	Stock, Pat	16-Oct-2006 18:07:39	
<input checked="" type="radio"/>	Active	Expenses	29116	AP Standard Expense Report Process	W29116	Stock, Pat	16-Oct-2006 16:26:57	
<input checked="" type="radio"/>	Active	Expenses	29114	AP Standard Expense Report Process	W29114	Frost, Jamie	16-Oct-2006 16:13:42	
<input checked="" type="radio"/>	Active	Expenses	29112	AP Standard Expense Report Process	W29112	Frost, Jamie	16-Oct-2006 16:04:16	
<input checked="" type="radio"/>	Active	Expenses	29111	AP Standard Expense Report Process	W29111	Jones, Kerry	16-Oct-2006 15:47:55	

Select Workflow and View...



Workflow Manager - Performance



- Caching of metrics data

- Data is refreshed periodically in the background

OR

- On Demand in the Dashboard

Workflow Manger Usability Notification Mailer

- Customer Pain Points
 - Confused with too many mailer setup parameters
 - Unable to easily find out the error when the mailer was down
 - Difficult to setup test and development mailers where a default configuration would suffice
 - One single sequence of pages (train) for Notification Mailer set-up. Set-up required user to visit every page.
 - DBAs had to review log files to uncover the error if the mailer went down
 - Non SSL connection to the IMAP Server

Workflow Manger Usability Notification Mailer

- Simplified configuration
 - Mailer Configuration split up into Basic & Advanced pages
 - All parameters necessary to configure mailer in one page
- Advanced Configuration
 - All other parameters for fine tuning configuration available via Advanced configuration

Notification Mailer – Basic Configuration

ORACLE Applications Manager Support Cart Setup Home Logout Help

Applications Dashboard | Site Map

Applications System:atg12oow > Workflow > Service Components > Component Details >

Edit Workflow Mailer: Basic Configuration: atg12oow

* Indicates required field

Details

* Name

Outbound Email Account (SMTP)

* Server Name
Host Name of the machine used to send email notifications (including full domain name).

Outbound SSL Enabled

Inbound Email Account (IMAP)

Inbound Processing Allow notification responses by email.

Server Name
Host Name of the machine to receive the email replies (including full domain name).

Username
Username for the Inbound Server

Password
Password for the Inbound Server

Reply-To Address
The address of the e-mail account that receives incoming messages, to which notification responses should be sent (for example: fred.smith@company.com).

Inbound SSL Enabled

✔ TIP Process and Discard folders will be created automatically if they do not already exist

- Simply configure inbound and outbound server and away you go

Notification Mailer – Advanced Configuration

ORACLE Applications Manager Support Cart Setup Home Logout Help

Applications Dashboard | Site Map

Define Details **E-Mail Servers** Message Generation Schedule Events Tags More

Edit Workflow Mailer: E-Mail Servers: atg120ow Cancel Back Step 3 of 8 Next

Indicates parameters that can be dynamically changed while the process is running.

General

* Mailer Node Name: WFMAIL
* Email Parser: oracle.apps.fnd.wf.mailer.TemplatedEmailParser
* Alternate email parser: oracle.apps.fnd.wf.mailer.DirectEmailParser
 Expunge Inbox on Close

Inbound Email Account

* Inbound Protocol: IMAP
* Inbound Server Name: ap6001oes.us.oracle.c
* Username: WF-atg120ow@emswf.com
* Password: *****
* Inbound Folder: INBOX
* Inbound connection time out: 120
* Inbound message fetch size: 100
* Maximum Ignore List size: 1000
 Inbound SSL Enabled

Outbound Email Account

* Outbound Protocol: SMTP
* Outbound Server Name: ap6299rt.us.oracle.co
Test Address: NONE
* Outbound connection time out: 120
 Outbound SSL Enabled

Email Processing

* Processed Folder: PROCESSED
The name of the folder in which successfully processed e-mails are placed.
* Discard Folder: DISCARD
The name of the folder in which unrecognized inbound e-mails are placed.
 Allow Forwarded Response
Select this option to allow a user to respond by e-mail to an e-mail notification that has been forwarded from another role.

Cancel Back Step 3 of 8 Next

- All parameters necessary for fine tuning the mailer available via advanced configuration

Workflow Manger Usability Notification Mailer

- **Systems Alerts Integration**
 - Sends a system alert if the mailer service encounters an error
 - Provide enhanced visibility to system administrators
 - Administrators do not have to review log files to know the status of the service
- **Error Handling**
 - Enhanced error handling for mass failures: In cases where many users have been set up with invalid email addresses, the workflow directory service is updated so that it no longer sends e-mails to those users
- **Override Address Verification**
 - Requires user to provide verification code to enable an override email address. Prevents spamming of unsuspecting user

Workflow Server - Performance

- Workflow Engine Bulk APIs
 - Allows a product team to create, start and update workflow processes in bulk
 - Bulk APIs bulk insert the activities and mark them “Deferred” to be processed by the Background Engine
- Bulking API's
 - `wf_engine_bulk.CreateProcess`
 - `wf_engine_bulk.StartProcess`
 - `wf_engine_bulk.FastForward`
 - `wf_engine_bulk.SetItemAttrDateArray`
 - `wf_engine_bulk.SetItemAttrNumberArray`
 - `wf_engine_bulk.SetItemAttrTextArray`

Workflow Server - Performance

- Workflow engine cache
 - All design time information cached by the server engine
 - Provides significant performance improvements for workflow engine calls within a single session
 - Background engine benefits substantially
- Business Events
 - Event and subscription caching at the PL/SQL and JAVA layer. Provides significant performance gains for event subscriptions processed within a single session
 - PL/SQL rule function optimization, dynamic calls to rule functions are now static

Oracle Workflow Diagnostics

Highly recommended that you run diagnostics to verify setup

- Workflow Objects Validity Test
 - Checks the Oracle Workflow database objects to verify that all the objects are valid
- Duplicate User Test
 - Checks the Oracle Workflow directory service to check for duplicates
- Notification Preference Validation Test
 - Checks the Oracle Workflow directory service to ensure that all roles with a notification preference for receiving e-mail notifications have an e-mail address defined.

Oracle Workflow Diagnostics

- **Generic Service Manager Setup Test**
 - Verifies that GSM and the Oracle Workflow service instances are enabled. It also checks whether a high number of operating system processes have been created for a service instance in the last few minutes, which may indicate an error
- **Business Event System Clone Test**
 - Checks certain standard agents and subscriptions required for internal Business Event System and notification mailer processing to verify that they are enabled and that their definitions include the correct local system. You can use this test after cloning or migrating an Oracle Applications instance to ensure that the local system references have been updated correctly for the new instance

Oracle Workflow Diagnostics

- Workflow Advanced Queue Rule Validation Test
 - Checks the standard WF_ERROR and WF_DEFERRED queues to verify that only one subscriber rule is defined for each queue. These queues are reserved for internal Oracle Workflow processing. You should not add any custom subscribers to these queues
- Workflow Agents/AQ Status Test
 - Checks the Business Event System agents, as well as the queues associated with these agents. The test verifies that the agents are enabled within the Business Event System. It also verifies that the queues and the queue tables in which they reside are valid database objects, and that the queues are enabled for enqueueing and dequeuing within Oracle Streams Advanced Queuing (AQ)

Oracle Workflow Diagnostics

- Mailer Diagnostic Test
 - Reports details about a notification and about the notification mailer that sent the notification. You can use this information to check the status of a particular notification or to investigate errors
- Mailer Component Test
 - Checks your notification mailer service components to verify that at least one notification mailer has been configured with all the parameters needed to run it
- Mailer Component Parameter Test
 - Checks your notification mailer service components to validate their configuration parameters (IMAP server ,SMTP server ...)

Oracle Workflow Diagnostics

- **Rule Function Validation Test**
 - Checks the rule functions defined for subscriptions and the generate functions defined for events in the Business Event System. For PL/SQL functions, the test verifies that the package and function exist in the database and are valid. For Java functions, the test verifies that the Java class exists in the classpath
- **Event Diagnostic Test**
 - Reports details about the Business Event System, including the statuses of the local system and agent listeners
- **Event Raise Test**
 - Checks the basic operation of the Business Event System by raising a test event from Java and from PL/SQL and executing synchronous and asynchronous subscriptions to that event

Maintaining a Healthy Workflow Environment



Maintaining a Healthy Workflow Environment

- Make sure you are familiar with the management tools
 - Oracle Applications Manager to Monitor Workflow
 - Workflow Purge
 - Workflow Background Engines
- Top Support Issues
 - Directory Services
 - Java Mailer

Central Administration Dashboard

Workflow System: atg12oow

Last Updated: 17-Oct-2006 16:36:46

Submit Request For

Notification Mailers Up
 Agent Listeners Up
 Service Components Up

Background Engines Down
 Purge Up
 Control Queue Cleanup Down

Related Database Parameters

Last Updated: 17-Oct-2006 16:32:41

Parameter Name	Parameter Value	Recommended Value	Description
job_queue_processes	2	10	number of job queue slave processes
aq_tm_processes	1	>= 1	number of AQ Time Managers to start

Workflow Metrics

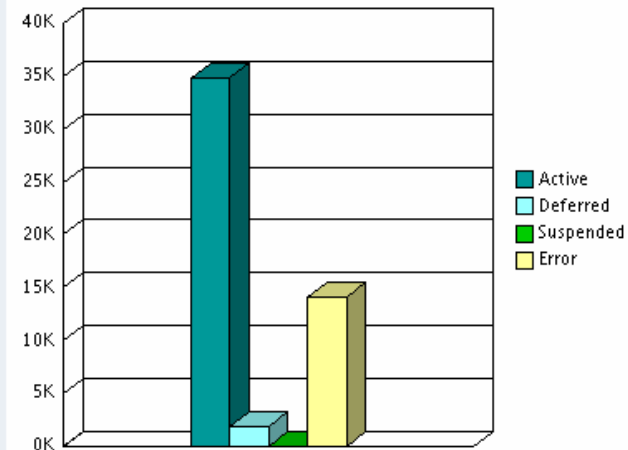
[Return to Top](#)

Work Items

Agent Activity

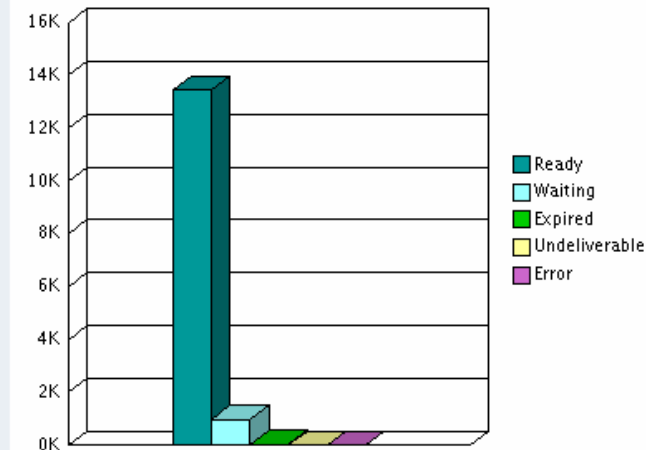
Hide

Last Updated: 17-Oct-2006 15:16:12



Hide

Last Updated: 17-Oct-2006 15:16:07



Workflow Process Administration

Applications Dashboard | Site Map
 Applications System:atg12oow > Workflow >

Workflow Purge: atg12oow View Completed Work Items Go

Requests Summary

[+ Show](#)

Completed Work Items

Hide

Filter Go

Last Updated: 17-Oct-2006 20:16:16

Select a work item type and ... View Details Previous 1-15 of 17 Next 2

Select	Work Item Type	Persistence Type	Retention Period	Count	Purgeable
<input checked="" type="radio"/>	ASO Approval	TEMP	0	6	0
<input type="radio"/>	Change Action	PERM	0	9	9
<input type="radio"/>	Change Workflow Routing Step	PERM	0	1	0
<input type="radio"/>	Dossier Approval Flow Enhanced	TEMP	0	1	0
<input type="radio"/>	HR	TEMP	0	12	0
<input type="radio"/>	IBC - Content Manager Workflow	TEMP	0	7	0
<input type="radio"/>	Knowledge Management Workflow Process	SYNC	0	34	34
<input type="radio"/>	Knowledge Management Workflow Process (New)	SYNC	0	165	165
<input type="radio"/>	OKL - Approvals	PERM	0	2	2
<input type="radio"/>	OM Order Header	TEMP	0	35	0
<input type="radio"/>	OM Order Line	TEMP	0	7521	0
<input type="radio"/>	PO Approval	TEMP	0	29	4
<input type="radio"/>	PO Approval Error	TEMP	0	5	0
<input type="radio"/>	PO Xml Delivery	TEMP	0	64	0
<input type="radio"/>	System: Error	TEMP	0	9829	0

Select a work item type and ... View Details Previous 1-15 of 17 Next 2

Programs to Maintain Workflow

- Workflow Purge
 - Workflow Items can generate considerable data. To maintain performance, the purge program will remove old data that is no longer needed
 - Purge can be easily scheduled through OAM
 - Purge can be scheduled for a specific item type to allow different retention periods to be used
 - Use the “Core Only” parameter to remove only runtime data. In a production instance with little changes to the item types, this can result in faster purge performance
 - On systems with more resources, use a larger commit frequency for faster purge performance

Programs to Maintain Workflow

- Workflow Background Engine
 - Used to progress deferred, timed out, and stuck processes
 - Run a minimum of three, one for each mode
 - Deferred should run most often based on business need
 - Time Out is normally not run as often as Deferred
 - Stuck is run least often, especially on a production instance
 - To identify processes as stuck requires considerable resources is is not as likely to happen on a production instance because a stuck process is due to incorrect process modeling

Top Issues - Directory Services

- Provides underlying data-model support for User Management and Role-Based Access Control RBAC
- FND_USER_RESP_GROUPS table is replaced with a view that points to WF_LOCAL_USER_ROLES
 - Designed to leverage RBAC features
- FND Security and Workflow Provide Coordinated Release Patches
 - Current patch is 5121512 “AOL User Responsibility Security Fixes Version 1”

Top-Issues - Directory Services

- Bulk-Synchronization - Common Errors
 - 4006 “While creating necessary indexes, duplicate values were found...”
 - Identify the originating system by submitting the program for each one until it fails
 - This indicates a data-corruption in the data coming from the originating system, or the seeding view
 - 4008 “Originating System FND_RESP is hierarchy enabled and hence cannot participate in Bulk Synchronization”
 - At this time if an originating system participates in a hierarchy it cannot be bulk-synchronized
 - Check for records referring to the originating system in WF_ROLE_HIERARCHIES

Top-Issues - Directory Services

- “Real-Time” Propagation
 - 4001 “Name is an invalid internal name because it contains a colon...”
 - Colons were reserved characters to designate an <orig_system>:<orig_system_id> format. Support for colons outside of this format is limited
 - Odd behavior such as user/role relationships still showing when a role was expired or not showing when a role was re-enabled
 - Make sure the agent listeners are running
 - The agent listener process deferred events to denormalize data within the directory services to provide faster access to the applications

More Information - Directory Services

- Synchronize Workflow Roles
 - Bulk refresh of the directory services
 - Originating systems that participate in hierarchical relationships cannot bulk synchronize at this time
 - WF_DIRECTORY_PARTITIONS shows registered originating systems along with the seeding views that are used to bulk refresh
 - If view names are blank, then WF_<orig_system>_ROLES and WF_<orig_system>_UR are used for roles and user/roles respectively
 - If the view name is set to 'NOBS', the bulk synchronization is specifically disabled

More Information - Directory Services

- Workflow Directory Services User/Role Validation
 - Detects and corrects missing or invalid denormalized user/role information
 - Parameters
 - Batch Size: Number of records that will be processed per commit cycle
 - Fix dangling user/roles: Removes any user/roles where the user and/or the role does not exist in WF_LOCAL_ROLES
 - Add missing user/role assignments: Adds any user/roles that are present in WF_LOCAL_USER_ROLES but missing in WF_USER_ROLE_ASSIGNMENTS
 - Update WHO columns in WF tables: Controls the updating of who columns when corrupt records are corrected

Top Issues - Java Mailer

- Will not start or stays in “Starting” state
 - Make sure GSM is running
 - Verify profile **Concurrent:GSM Enabled**
 - Verify that this service instance is enabled
 - Verify the ICM configuration by starting debug service. (see Note 242941.1 “How to Troubleshoot Java-based Workflow Notification Mailer”)
 - Check the latest FNDGPGSC*.txt for the service container and look for error messages

Java Mailer Issues (continued)

- Workflow Notification Mailer service starts but soon stops with “Stopped with error/System Deactivated”
 - When an error occurs, the mailer will be restarted until a threshold defined in `SVC_COMP_MAX_ERROR_COUNT` (default 10) has been reached, then it will be deactivated
 - Validate the mailer configuration from OAM by editing it
 - The Edit process validates the mailer setup
 - The mailer’s log should provide details on the error
 - Common errors are IMAP configuration, etc

Workflow Mailer Administration

- Configuring, Monitoring, and Trouble-Shooting the Mailer
 - View log files
 - View event log...

The screenshot displays the Oracle Applications Manager interface for Workflow Mailer administration. The page title is "Service Components: atg12oow". The breadcrumb trail is "Applications System:atg12oow > Workflow >". The page shows a table of service components with one entry: "Workflow Notification Mailer" with a status of "Running". The interface includes navigation links like "Add to Support Cart", "Verify All", and "Create".

ORACLE Applications Manager

Support Cart Setup Home Logout Help

Applications Dashboard | Site Map

Applications System:atg12oow > Workflow >

Service Components: atg12oow

Last Updated : 18-Oct-2006 16:53:11

Filter Type (Internal) WF_MAILER Go

Add to Support Cart

Verify All Create

Select a Service Component and ... Edit View Log View Details View Event History Delete

Select	Name	Status	Type	Startup Mode	Container Type	Container	Actions
<input checked="" type="radio"/>	Workflow Notification Mailer	Running	Workflow Mailer	Automatic	Oracle Applications GSM	Workflow Mailer Service	Refresh <input type="button" value="Go"/>

TIP GSM = Generic Service Management

Add to Support Cart

Support Cart Setup Home Logout Help

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Java Mailer Issues (continued)

- Email Notifications are not Being Sent
 - Ensure that the Notification Mailer and the Deferred Agent Listeners are running
 - This can be done through OAM
 - To diagnose using a specific notification use `$FND_TOP/sql/wfmlrdbg.sql`
 - Notifications with OA Framework content may not be properly rendered
 - Can be SSL and/or Techstack related
 - SSL environment needs to include `$ORACLE_HOME/..iAS/lib` in `AF_LD_LIBRARY_PATH`
 - On tier where mailer runs, plug URL in browser after authenticating as SYSADMIN.

Java Mailer Issues (continued)

- Responses to Email Notifications are not Being Processed
 - Ensure that the Workflow Notification Mailer and Workflow Notification Inbound Agent Listener are running
 - Verify if the response has arrived in the mailer's IMAP account inbox
 - Use any IMAP capable email client but first stop the mailer and make sure to mark the message as unread
 - Check for problems processing the response by running the Mailer component at STATEMENT level
 - Check for problems processing the receive event by looking for any oracle.apps.wf.notification.receive.% events in the WF_ERROR queue through OAM

Workflow Agents & Queues Administration

ORACLE Applications Manager Support Cart Setup Home Logout Help

Applications Dashboard | Site Map
 Applications System: atg12oow > Workflow >

Agent Activity: atg12oow

Review the numbers of event messages with different statuses on different Business Event System agents.
 Last Updated: 17-Oct-2006 20:16:07

Select an Agent and ...

Select Agent	Ready	Waiting	Processed	Expired	Undeliverable
<input checked="" type="radio"/> ECX_INBOUND	0	0	0	0	0
<input type="radio"/> ECX_IN_OAG_Q	0	0	0	0	0
<input type="radio"/> ECX_OUTBOUND	6	0	0	0	0
<input type="radio"/> WF_CONTROL	0	0	0	0	0
<input type="radio"/> WF_DEFERRED	0	981	19	0	0
<input type="radio"/> WF_ERROR	0	0	0	16	0
<input type="radio"/> WF_IN	0	0	0	0	0
<input type="radio"/> WF_JAVA_DEFERRED	0	0	30	0	0
<input type="radio"/> WF_JAVA_ERROR	0	0	0	0	0
<input type="radio"/> WF_JMS_IN	0	0	0	0	0
<input type="radio"/> WF_JMS_JMS_OUT	0	0	0	0	0
<input type="radio"/> WF_JMS_OUT	0	0	0	0	0
<input type="radio"/> WF_NOTIFICATION_IN	0	0	0	0	0
<input type="radio"/> WF_NOTIFICATION_OUT	0	0	17	31	0
<input type="radio"/> WF_OUT	13425	0	0	0	0
<input type="radio"/> WF_REPLAY_IN	0	0	0	0	0
<input type="radio"/> WF_REPLAY_OUT	0	0	0	0	0
<input type="radio"/> WF_WS_JMS_IN	0	0	0	0	0
<input type="radio"/> WF_WS_JMS_OUT	0	0	0	0	0
<input type="radio"/> WF_WS_SAMPLE	0	0	0	0	0

Select an Agent and ...

Support Cart Setup Home Logout Help

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Diagnosing Common Issues

- Execute `$FND_TOP/sql/wfver.sql` and spool the output whenever logging a TAR
- Identify the Applications Technology Level
 - FND.H = 11.5.10
- Make sure you are on the latest ATG rollup
 - Currently: 4676589 11i.ATG_PF.H.RUP4
- Provide output of diagnostic scripts
 - `$FND_TOP/sql/wfstat.sql`
 - `$FND_TOP/sql/wfmlrdbg.sql`
 - `$FND_TOP/sql/wfdirchk.sql`
- See [Note: 332152.1](#) “OWF H Diagnostics and Solutions” On OracleMetalink for more details

The image features the Oracle logo, which consists of a large, stylized letter 'O' on the left and a large, stylized letter 'A' on the right. Both letters are rendered in a dark gray, serif font. A bright red ampersand (&) is positioned between the two letters, overlapping them. The ampersand is also in a serif font and is significantly larger than the letters it overlaps. The entire logo is centered on a white background.



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