

Oracle Applications Release 11i Newsletter

The contents of this newsletter were contributed by **Solution Beacon** consultants who have accumulated extensive experience during the numerous installations, implementations, and upgrades of Release 11i that we have performed for our clients. We also welcome your participation in this newsletter. If you would like to contribute on any Release 11i topic, please send your contact information, topic, and a short abstract to mweiss@solutionbeacon.com. We would also appreciate any feedback from our readers if you have successfully or unsuccessfully implemented one of the suggestions from any of the newsletters. Comments or suggestions are always appreciated. Please send to mweiss@solutionbeacon.com.

Mary Lou Weiss, Alicia Hoekstra, and Randy Giefer, Editors, Solution Beacon

OAUG: Success Through Education

The OAUG and Solution Beacon have teamed up to bring you another series of workshops, *The Trail to TexasSM*, in March through May of 2005 prior to the OAUG Connection Point conference in June 2005. The *Trail to Texas* started with NorCal OAUG on March 7, continued with New England OAUG on March 21, is proceeding on to SouthWest Regional OAUG in Los Angeles on April 22, followed by Central States OAUG in St. Louis on April 25, and wraps up with sessions at IOUG Live! 2005 on May 4 in Orlando.

Special Note: You must register to attend IOUG Live! 2005 by **April 1st** to take advantage of early bird savings of \$325 (USD) off the onsite registration price! Register now at www.ioug.org. One lucky attendee of the three *Trail to TexasSM* sessions at IOUG Live! 2005 will win a **one year FREE OAUG membership**.

Get a head start on OAUG Connection Point 2005 on the *Trail to Texas*!

Mary Lou Weiss and Randy Giefer, Editors, Solution

Ask the SB Experts

Question: Do you have a desupport document or url? There seem to be many conflicting documents on the web. We are on 11.5.7 and Oracle8i. Do you have any desupport documents? We need the latest info on ECS versus ES dates.

Answer: See MetaLink 290211.1 for Error Correction Support dates.

Question: Why does my response time slow down at certain times during the day?

Answer: You probably have long running processes assigned to execute in the standard manager queue. The standard concurrent manager executes all processes not assigned to any other concurrent manager. This means that all processing request form the users are



contending for the processes available in the standard manager. When normal processing contents for this time it operates fast enough to not show a diminished response. However, when your planning processes or long running reports are also trying run using this time, the system appears to slow down.

You have a couple choices to resolve the issue. First, you can schedule long running processes and reports during slow periods of the day or on week ends. Next, you can create additional concurrent managers and give them a sufficient number of processes to manage the expected load. Sometimes it takes trial & error to identify a reasonable number of processes for each new concurrent manager.

Most companies implement at least two additional concurrent managers: one for long running reports and one for the planning processes. This takes the load off the standard manager and response time will improve. Oracle recommends that the planning processes, as represented by the responsibilities that initiate the processes, be assigned to execute in a new manager. Some folks get confused as there is as seeded manager identified as the planning manager. The seeded manager is intended to run a very specific program and is not the manager for the actual planning processes. You need to create a new manager to accomplish the task of relieving the standard process created by the planning requests.

Keep in mind that the planning process can spawn as many as 22 processes many of which run concurrently. We recommend that a concurrent manager supporting the planning processes should have 20 processes. Others feel that slightly less processes will suffice.

Question: Why does my system sometimes freeze and must be bounced to free the processes and let users continue. I've noticed that when this happens the planning system is usually running.

Answer: What is actually happening is most likely that spawned request out number the available processes in the standard manager. When this happens, the next spawn request has no process in which to start. Since no process can start and none can complete, you have a hung system.

You are probably running all requests in the standard manager and have too few processes available to support additional when spawned processes. The number of processes in the standard manager needs to be sufficient to support the requests that execute in the standard manager. The first thing you need to do is evaluate the number of processes in your standard manager and increase the number to one that will support both the number of users and the processes being executed. We recommend 15, but this is a technical issue and your DBAs need to assist with this decision.

Question: Do you have a Tivoli / RMAN script that backs up the database from a PROD (or source) database and restores it to a different TARGET database and or server? This is an 8.1.7.4 RDBMS.

We know that you can specify the target but we haven't found any examples of restoring a database with different mount points for the target server, etc. We guess that if we can restore the data files we can recreate the control file.

Answer: Check out MetaLink note 73974.1. It assumes that you are using an RMAN catalog.

The Senior Consultants at Solution Beacon, LLC

AD.I.1 New Features and Changes

Recently Oracle Applications DBA patch AD.I.1 was released. Please be aware of the new and changed features listed in the README of this patch. There are some important changes that can increase the efficiency of patching and uptime of your environment while patching. As always, ensure you review the pre and post install tasks and requirements as a part of your plan to implement this patch. The new features and changes are listed below:

New Features

AD Administration and AD Controller Support for Non-interactive Mode

The non-interactive mode of AD Administration (adadmin) has been expanded to include all tasks and AD Controller (adctrl) has been updated to run in non-interactive mode, thus improving the automation of AD utilities.

AD Merge Patch Utility – Support for Merging Zip Files

Merging patches used to require each ARU patch zip file to be unzipped before being merged. AD Merge Patch can now create a merged patch patch from a set of ARU zip files. The use of this feature requires you to list the ARU zip files in a manifest file, then point AD Merge Patch to this file during the merging process.

AutoConfig Integration with AutoPatch

AutoPatch automatically calls AutoConfig to instantiate and run new templates contained in a patch. This reduces the number of manual post-patch steps. When AutoPatch is run in test mode, AutoConfig also runs in test mode. The test mode of AutoConfig identifies the configuration files that would have been updated had the patch been applied in normal mode. Minipack AD.I.1 contains ADX.E, which includes the latest enhancements to AutoConfig.

Creation of Large Indexes Using Parallel Slaves

Index creation on large tables can take a significant time. Allowing large indexes to be automatically created using parallel slaves if the table is larger than a specified threshold helps reduce this time.

Distributed AD

Patch downtimes can significantly be reduced by better leveraging the machine resources of your Applications System. Distributed AD allows you to start AD workers on any node of a Shared APPL_TOP system, which greatly increases the number of workers allowed in an AutoPatch session. For more information on Distributed AD, refer to Oracle *MetaLink* Document [236469.1](#).

Eliminate MRC Maintenance Overhead if on 11.5.10

The APPS_MRC Multiple Reporting Currencies schema is now obsolete. MRC related functionalities are now maintained in the product base schemas, obviating the MRC schema. This reduces patch downtime and the complexity of the Oracle Applications system.

Maintenance Mode

Maintenance mode provides a clear separation between normal runtime operation of Oracle Applications and system downtime for maintenance. Enabling the maintenance mode feature shuts down the Workflow Business Events System and sets up function security so that no Oracle Applications functions are available to users. Used only during AutoPatch sessions, maintenance mode ensures optimal performance and reduces downtime when applying a patch. For more information on maintenance mode, refer to Preparing your System for Patching in [Oracle Applications Maintenance Utilities](#).

Patch and File History XML Reports

SQL report files that generate XML reports of patch and file histories of an Oracle Applications system are now available. These reports can be used to view patch history information for different systems in your environment.

Changed Features

AD Utility Timing Information in OAM

The In Progress or Completed status of an AutoPatch or an AD Administration session is accessible from the Oracle Applications Manager (OAM), where information such as how many jobs have been completed or are remaining can be monitored. The OAM Timing Reports also capture job timing information and total times for AutoPatch and AD Administration sessions. Previously, timing information was stored in the AD Timing Report, a file in the file system. The OAM Timing Reports feature moves the contents of this file to database tables. This feature is available in OAM.H.

AutoPatch Writes Copy Action Details to the Informational Log File (.lgi)

As AutoPatch backs up files from the file system or copies files to the file system, it writes detailed information about these actions to the .lgi file, not to the .log file as in prior versions of AD.

Improved adalldefaults.txt Support

All menu options in AutoPatch and AD Administration offer defaults file support. All options have been integrated in one `adalldefaultsfile.txt`, which also contains improved explanation as to what menu options the Name/Value pairs map to. The `adalldefaultsfile.txt` is now created and maintained by AutoConfig.

Improved Java Servlet Page Compilation

To reduce unnecessary downtime, AutoPatch will compile Java Server Pages (JSP) only if the `APPL_TOP` on which it is run is implemented as a Web server type.

Improved Patch History for Partially Applied Patches

When applying the copy portion of a patch, if the patch does not complete and is abandoned, a mismatch between the file version on the file system and database could occur. Patch history information is now recorded immediately following the copying of new files, therefore if the patch fails and is abandoned, the correct version is recorded.

Increased Help Options for all AD Utilities

Command line Help content for all AD utilities has been improved and expanded to display all options and usage for the utility. To use help, type the help option after the program name, for example, `adpatch help=y`.

ODF Support Locally-managed Tablespaces – Sequence Caching

Support for all locally managed tablespace extent allocation types is now provided for objects managed through Object Description Files (ODFs). In addition, sequence cache values that have a value greater in the database than contained in the ODF will remain unmodified.

Kevin Dahl, Solution Beacon

Setting Up Resources and Routings

Many organizations struggle with an approach to defining resources and using resources to load and schedule the facility. The question is usually, "what do I schedule to manage my production?" The answer to this question is dependent upon how you perform production and what is measured when evaluating capacity and schedules.

There are two primary approaches to managing production. First, define sections of the plant where work is performed. Second, you schedule individual primary machines as the work progresses through production.

Time based Setups

Work occurring in designated locations where material and resources are brought to the work, is usually scheduled, load and managed by using time in a location as the driving factor. Floor

position and the work being done in the “designated” time are important. This approach is commonly used for fabrication plants (large assembly) such as the aircraft industry, large engine assembly, and facilities producing heavy products that are hard to move during the process and where material and resources are brought to an assembly location.

Most folks define the location as a department and then time as a resource. An example would be “Station 1” as a department and 2 weeks worth of time (the time required to complete the work in “Station!”) as a resource. This is repeated for each station & time requirement to build the product. When the routing is created, the time resource is the primary resource and is scheduled. All other resources are assigned to the operation along with their time requirements, but they are not flagged as scheduled.

This approach evaluates the time capacity as a management factor for the facility. The primary load is the scheduled time for each station. The other resources are not scheduled, but their load is included in the time frame of the scheduled station.

This provides for the capacity definition as time and each additional resource capacity is identified for load but not schedule purposes. The schedule for the build is based and managed by time while the other resources are loaded into the correct time frames for management evaluation. All resources can be viewed in terms of capacity, load and schedule.

Machine Based Setup

This type of capacity, load and scheduling is usually used in metal cutting or assembly line type manufacturing. In this setup, time is defined as a factor of a resource not a specific resource. Each resource is defined in terms of it’s capacity and assigned to departments where the resource is used. The resources are assigned by operation in each routing.

Time requirements are defined for each resource based upon that resource’s time required to manufacture one of the product. Each resource required for an operation is defined with that operation.

The resources are scheduled according to their use in that operation. If you cut metal such as with a mill, you would define the mill as the scheduled operation. If burs are removed after the cutting, then the resource for bur removal is also scheduled this provides for the schedule to reflect the time required to mill the order quantity then remove burs. If the bur removal occurs on pieces while the next piece is milled then the bur process would not be scheduled indicating over-lapping activities. In either case, the time it takes to mill and remove burs is available for load definition when the work is expected to be in the shop. The shop schedule will correctly reflect the amount of time required to build the expected quantity.

Summary

The approaches described above are only examples of capacity and resource definition possibilities. Each facility must evaluate their manufacturing environment and initiate a plan to support that facility. In some cases, multiple approaches may be necessary as different portions of a facility may be managed in differing ways. Once detail capacity and resources are defined,

it can be difficult and costly to revise the approach as it may mean redefining resources, departments and routings. Testing and management evaluation and agreement are necessary to obtain the optimal environment.

Dave Tipping, Solution Beacon

11i Database 9.2.0.6 Certification

9.2.0.6 is now certified for use with the E-Business Suite version 11.5.7 and above on most of the Tier I platforms. See MetaLink's Certify section for your combination of software and platform. Document ID 216550.1 describes the Interoperability Notes for Oracle Applications Release 11i with Oracle 9i Release 2 (9.2.0).

Jeff Holt and Randy Giefer, Solution Beacon

Instance Crash With Solaris9 + 9.2.0.5 + 64bit Combination

The combination of Solaris 9 + 9.2.0.5 + 64 bit requires database patch 3566420. If not, over time (1 or 2 days) the instance will crash with ORA-600's. In our case, it even led to data corruption. Oracle has the patch listed in "Oracle E-Business Suite Recommended Performance Patches" document 244040.1. However, given the severity of the problem, we believe it should be classified as "Required", not "Recommended".

Here are the database alert log entries:

```
Thu Mar 17 20:40:55 2005
Errors in file
/sb/sbprod/sbproddb/9.2.0/admin/sbprod_vhost01/bdump/sbprod_dbw0_23478.trc:
ORA-00600: internal error code, arguments: [kslawe:!pwq], [0x38F5D7B70], [],
[], [], [], [], []
Thu Mar 17 20:40:55 2005
DBW0: terminating instance due to error 600
Thu Mar 17 20:40:55 2005
```

And then after restarting the instance:

```
Beginning crash recovery of 1 threads
Thu Mar 17 21:11:04 2005
Started redo scan
Thu Mar 17 21:11:05 2005
Completed redo scan
126451 redo blocks read, 5585 data blocks need recovery
Thu Mar 17 21:11:06 2005
Started recovery at
Thread 1: logseq 378, block 122251, scn 0.0
Recovery of Online Redo Log: Thread 1 Group 2 Seq 378 Reading mem 0
Mem# 0 errs 0: /sb/sbprod/sbproddata/redo02.log
```

```
Thu Mar 17 21:11:07 2005
Errors in file
/sb/sbprod/sbproddb/9.2.0/admin/sbprod_vhost01/udump/sbprod_ora_584.trc:
ORA-00600: internal error code, arguments: [4553], [2], [0], [], [], [], [], []
Thu Mar 17 21:11:08 2005
Errors in file
/sb/sbprod/sbproddb/9.2.0/admin/sbprod_vhost01/udump/sbprod_ora_584.trc:
ORA-01578: ORACLE data block corrupted (file # 1, block # 750323)
ORA-01110: data file 1: '/sb/sbprod/sbproddata/system01.dbf'
ORA-10564: tablespace SYSTEM
ORA-01110: data file 1: '/sb/sbprod/sbproddata/system01.dbf'
ORA-00600: internal error code, arguments: [4553], [2], [0], [], [], [], [], []
```

Jeff Holt, Solution Beacon

11.5.10 Workflow Changes

New and Changed features and components

This section lists the major features and components that were added or changed in 11.5.10 for Oracle Workflow Mini-pack 11i.OWF.H. These notes also apply for 11.5.9 environments with the Oracle Workflow Mini-pack 11i.OWF.H installed. The source of this information is MetaLink notes 258312.1 and 297099.1

Terminology Changes

Oracle is renaming some of the workflow components:

Depending on the release you are currently on, you may have already seen that 'Notification Rules' had become 'Routing Rules'. In 11.5.10 they are now 'Vacation Rules'.

'Item Type' is being replaced by the term 'Workflow Type' and 'Item Key' is now 'Workflow'. This is most evident in the Workflow Monitor or Find Processes screen, where the fields are relabeled.

Additionally, in the Find Processes screen, these fields are only shown when you click the 'Search More Search Options' link.

Oracle Applications Manager (OAM) available from Workflow Admin responsibilities

Workflow Administrators can now access the Workflow Manager portion of OAM directly from any of the workflow administrator responsibilities. This will eliminate the need to sign into OAM separately and will provide greater security for prohibiting access to other portions of OAM.

Oracle Applications Logging:

Oracle Workflow now uses the Oracle Applications Logging framework to standardize and centralize in the database logging activities related to the Oracle Workflow Business Event System and Oracle XML Gateway.



Use the Oracle Application Object Library system profile options to enable logging and to set the logging levels. Oracle Applications Logging supports six levels of logging defined as follows:

- 1 – Statement
- 2 – Procedure
- 3 – Event
- 4 – Exception
- 5 – Error
- 6 – Unexpected

In Oracle Applications Manager, navigate to the System Alerts and Metrics component and select the Logs link to query the process log details. The process log details can be included in the support cart as supporting documentation when filing an incident report.

Oracle Diagnostics

Diagnostic scripts based on the Oracle Diagnostics framework are provided for key Oracle Workflow and Oracle XML Gateway processes to facilitate self-service troubleshooting. These diagnostic scripts support the following key processes:

- Directory Services
- Generic Service Component Framework
- Mailers
- Transport Agent
- Workflow
- Web Services
- XML Gateway

Navigate to the Diagnostics link within Oracle Applications Manager to launch a specific diagnostic script or all the registered diagnostic scripts associated with the Application Object Library application. The diagnostic results can be included in the support cart as supporting documentation when filing an incident report.

Embedding Oracle Applications Framework Regions in Notifications

Oracle Workflow now supports embedding an Oracle Applications Framework region in the body of a notification, giving the notification an application-specific context. A notification that includes such regions can be displayed in the Notification Details Web page and can be sent by e-mail as HTML. The notification includes a link to any attachments, making it easier for the reviewer to access the reference data.

Workflow Engine Enhancements



Enhancements for the Workflow Engine includes:

- Enhancing concurrency by locking a work item before any action is executed for it.
- Exposing all variables related to comments and "more information" requests in post-notification functions.
- Tracking Workflow administrator actions such as expedite, retry and reassign in the Oracle Workflow data model.

Workflow Directory Service (Version 4)

New features and enhancements for Oracle Workflow directory service include:

- Multi-Language Support (MLS) based on session language.
- Tracking role relationships.
- Providing ownership by the corresponding Oracle Applications product for product-specific Workflow directory service database views.
- Role hierarchy support. This feature is leveraged by the Security Grants feature of Oracle Application Object Library and the Oracle User Management (UMX) product.

Additionally, you should no longer have to run the directory sync program (except for market view approvals and channels). This is actually dependent on patches installed for the applications that populate data into the Directory Services, but 11.5.10 includes all the patches. To be sure, see MetaLink note 171703.1 for the latest directory sync patch information (this note applied to 11.5.9 environments. If you have applied the patches mentioned, then you should not be running bulk sync for the partitions included in each patch).

Purging Enhancements

The WF_PURGE package and the Purge Obsolete Workflow Runtime Data concurrent program are enhanced to purge Oracle XML Gateway messaging and log data for transactions associated with the workflow being purged. You can also specify additional selection criteria, such as transaction type and subtype, to purge messages that are not associated with any workflow process.

Additionally, whenever notifications are purged, comments and electronic signature information associated with those notifications are purged as well.

The Purge Obsolete Workflow Runtime Data program purges obsolete runtime information associated with work items, including status information and any associated notifications and Oracle XML Gateway transactions. By default, it also purges obsolete design information, such as activities that are no longer in use and expired users and roles (very useful for purging adhoc roles as the directory sync program never addressed this issue), and obsolete runtime information not associated with work items, such as notifications or Oracle XML Gateway transactions that were not handled through a workflow process. You can optionally choose to purge only core runtime information associated with work items for performance gain during

periods of high activity, and purge all obsolete information as part of your routine maintenance during periods of low activity.

Notification Details Page

New features and enhancements for the Notification Details page and related pages include the ability to:

- Display the new Workflow Action History region in notifications. Workflow developers can optionally replace the standard Action History region with an application-specific region using the special #HISTORY message attribute, or hide this region by defining an empty #HISTORY message attribute.
- Optionally replace the standard notification header region using the special #HDR_REGION message attribute.
- Optionally display or hide additional features using the Oracle Applications Personalization Framework, including:
 - Printable Page button
 - Notification ID
- Display the responder in a closed notification along with a message indicating that the notification is closed. For response-required notifications, the message also includes the notification result.
- Search for a role by assignee type when reassigning a notification or requesting information.

User Interface Pages Upgraded to Oracle Applications Framework Technology

The following user interface pages, previously built using PL/SQL Web Toolkit technology, are now available in Oracle Applications Framework technology:

- Workflow Configuration (formerly Global Workflow Preferences)
- Administration, Notification Search (formerly Find Notifications)
- Administration, Vacation Rules (formerly Routing Rules)

Additionally, the seeded responsibilities for Oracle Workflow have been updated to remove the obsolete pages and add the new Oracle Applications Framework-based pages. Effective with Release 11.5.10, all Oracle Workflow PL/SQL Web Toolkit-based user interfaces (identified as having gray backgrounds) have been deleted and are de-supported in favor of the Oracle Applications Framework-based equivalents.

Automated Cloning

Oracle Workflow now supports completely automated cloning using the Oracle Applications Manager cloning feature. No manual steps are required any longer for Oracle Workflow;

instead, all Oracle Workflow information is updated automatically to the correct settings for the new target instance.

Language Preference for Notifications

When users log in to Oracle Applications, they can select a session-level language in the login window, which overrides their user-level language preference for that session. However, Oracle Workflow still uses the user-level language preference to determine the language in which e-mail notifications are sent. Users can use the Preferences page to set their user-level language preference, which is also stored in the ICX: Language profile option.

New and Changed HTML Pages

The following new Oracle Applications Framework-based pages have been added in this release:

- Workflow Configuration – Replaces the obsolete Global Workflow Preferences page
- Worklist Access – Lets one user serve as a proxy for another to respond to notifications on the owner's behalf
- Administration, Notification Search – Lets administrators search for and view notifications sent to other users
- Administration, Vacation Rules – Lets administrators define notification vacation rules for other users

The following Oracle Workflow Manager pages have been added in this release:

- Search Queue pages – Let you review business event messages and XML messages on Oracle Workflow and Oracle XML Gateway agents
- Java agent listener configuration wizard – Lets you create or modify Java agent listener service components
- Web services outbound configuration wizard – Lets you create or modify Web services outbound service components

The following Oracle Workflow Manager pages have enhancements in this release:

- Workflow System status page – Updated links for improved access to Oracle Workflow Manager features
- Notification mailer configuration wizard – Updated configuration parameters
- PL/SQL agent listener configuration wizard – Updated configuration parameters

The following PL/SQL Web Toolkit- based pages are now obsolete:

- Global Workflow Preferences – Replaced by the Oracle Applications Framework-based Workflow Configuration page
- Event System Local Queues (Event Queue Summary) – Replaced by the Search Queue pages in Oracle Workflow Manager

The "Check Event Manager Setup" form is decommissioned and will not be accessible via SSWA. It is now accessible via OAM.

New Tables

The WF_ROLE_HIERARCHY and WF_USER_ROLE_ASSIGNMENTS tables are added to support role hierarchy functionality in the Oracle Workflow directory service.

Changed Tables

The following columns are added to the WF_LOCAL_ROLES table:

Column Name	Type
PARENT_ORIG_SYSTEM	VARCHAR2(30)
PARENT_ORIG_SYSTEM_ID	NUMBER
OWNER_TAG	VARCHAR2(50)
CREATED_BY	NUMBER(15)
CREATION_DATE	DATE
LAST_UPDATED_BY	NUMBER(15)
LAST_UPDATE_DATE	DATE
LAST_UPDATE_LOGIN	NUMBER(15)

The following columns are added to the WF_LOCAL_USER_ROLES table:

Column Name	Type
OWNER_TAG	VARCHAR2(50)
CREATED_BY	NUMBER(15)
CREATION_DATE	DATE
LAST_UPDATED_BY	NUMBER(15)
LAST_UPDATE_DATE	DATE
LAST_UPDATE_LOGIN	NUMBER(15)
ASSIGNMENT_TYPE	VARCHAR2(1)
PARENT_ORIG_SYSTEM	VARCHAR2(30)
PARENT_ORIG_SYSTEM_ID	NUMBER

Column Name	Type
ROLE_END_DATE	DATE
ROLE_START_DATE	DATE
USER_END_DATE	DATE
USER_START_DATE	DATE

Venkat Kancherla and Karen Brownfield, Solution Beacon

EDI Stress Test

There are profile options that also impact the performance of order import. The section below is from an OM performance document. Some functionality can be disabled through profile options if it is not needed and performance will improve. Please have the appropriate functional person review the information below to determine if any of the settings can be changed to improve performance in your case.

C. Tips for Improving Order Processing Times

1. Turn Debug Off

Set profile OM: Debug Level to '0'. This profile should be set only at the user level. Having debug on can result in a significant performance overhead, increasing the processing times up to 2-10 times depending on the process.

For performance issues where development needs to identify the code execution paths, reproduce the problem with the profile on to generate the debug file. But for generating traces/recording user elapsed times, debug should be OFF.

Improves: All Processes Identification of whether profile was turned on during tracing: Trace file would show – select against utl_file_dir. However, you can't rely on the trace as this SQL appears only if trace was turned on before turning debug on.

2. Automatic Attachments

OM allows setup of rules to automatically attach documents based on order/line attributes when creating the order. If the customer does not use this automatic attachments functionality, set the following profile value: OM: Apply Automatic Attachments -> 'No'.

Improves: Order/Line Creation Times (Order Import, Sales Order Form – Save Times, Public Process Order APIs).

Identification of whether profile is set to 'Yes': Trace File would show – select to_char(sold_to_org_id), to_char(order_type_id) ... from oe_order_headers_all.

Debug File would show – Enter oe_fnd_attachments_pvt.add_attachments_automatic.

3. Repricing at Booking

Oracle Pricing now allows customers to setup modifiers that apply only when you book the orders. If the customer does not use this functionality (usual requirement is for all the modifiers to be applied at order/line creation time), please do the following:

Using Pricing Manager responsibility, invoke Event-Phase screen. Query all phases and for any phase that has a BOOK event, set the start date & end date to some prior date on the event line thus disabling the BOOK event for pricing.

Improves: Booking Process (Sales Order Form – Book Button, Order Import/Process Order API calls with action request to BOOK the order).

Identification of whether booking is executing repricing: Trace File would show – One of the expensive statements is: 'begin OE_BOOK_WF.BOOK_ORDER (:v1, :v2, :v3, :v4, :v5); end;'

Debug File – Pricing debug messages between 'Enter OE_Order_Book.Book_Order' and 'Exit OE_Order_Book.Book_Order'

4. Scheduling during Order/Line Creation

This is usually recommended for order import runs where the order is booked and the line flows are setup to automatically schedule order lines after booking. There is one drawback however – even if one line fails scheduling (e.g. item is not available), it will result in the entire order not being imported. If scheduling was done via the line workflow, all lines would still be created and lines that failed scheduling are stuck at the schedule line workflow activity. A concurrent program/manual re-scheduling can be performed on such lines. In particular, this is useful when items are non-ATP as the chances of line failing scheduling is not very likely unless other parameters required for scheduling are not specified (e.g. request_date, ship_from_org).

For order import or batch api calls, scheduling at order creation can be done by passing schedule_ship_date on the interface tables or the line table parameters respectively. From user interface, set the OM: Auto Schedule profile to 'Yes' or Tools -> AutoSchedule to 'Yes'.

Improves: Scheduling Process (Booking times are also improved if line flows were automatically scheduling after booking).

Identification of whether scheduling is done via workflow: Trace File would show – One of the expensive statements is: 'begin OE_OEOL_SCH.SCHEDULE_LINE (:v1, :v2, :v3, :v4, :v5); end;'

5. Deferred Scheduling

By modifying line workflow to have scheduling as a deferred activity. Using such line flows would result in orders being imported as booked but not scheduled. A separate workflow

background engine program can be executed after order import to schedule these imported order lines.

Implement scheduling at creation (step #4 above):

a) If order lines are to be imported & scheduled immediately. And also if lines are mostly scheduled for the requested date.

Implement deferred scheduling:

a) If items are ATPable and there is a possibility that lines might fail scheduling but should be still imported.

b) If you would like order import to be even faster (than with setup #4) and can defer scheduling process to a later time in the day when there is less system load.

Improves: Scheduling Process (Booking times are also improved if line flows were automatically scheduling after booking).

Identification of whether scheduling is done via workflow: Trace File would show - One of the expensive statements is: 'begin OE_OEOL_SCH.SCHEDULE_LINE (:v1, :v2, :v3, :v4, :v5); end;'

For more information on deferring scheduling please review the white paper 'Optimizing Performance for the Order Management Booking Process ' on MetaLink: Top Tech Docs -> E-Business Suite: ERP -> Order Management -> White Papers.

6. Passing all available values

For order import or other batch calls to order import, pass all the known attribute values on the interface tables or the tables passed to process order apis instead of using defaulting to get these values. For e.g. if you know that the ship to on the line is defaulted from the header, pass the ship to on the line to be the same as the header value. This will avoid the cost of checking defaulting rules & updating these attributes within Order Management.

Improves: Order/Line Creation Times (Order Import, Public Process Order APIs)

7. Passing same attribute values on lines & header to improve validation times

For order import or other batch calls where order header is being created with the order lines, make sure that the attribute values are specified on header as well. For the attributes where it is applicable, pass the same values on both header & lines. For e.g. set salesrep_id to be 1000 on the header AND on all the lines of the order. With this setup, salesrep_id would be validated only once.

Note that this requires the patch for bug be applied which has the above validation optimization fix.

Improves: Order Line Creation Times (Order Import, Public Process Order APIs)

Identification of attributes which are being validated for every line: Trace File would show – Number of executions of validation statement corresponds to number of order lines. Such SQL start with 'select 'VALID' from'.
.

8. Streamlining Workflow

Better performance is also observed by streamlining workflows i.e. build the flows using only functional activities and eliminate all sub-processes. This gets rid of the overhead associated with maintaining status information for the sub-process & start/end activities inside these sub-processes. When using parallel threads of order import, it also reduces contention as DML against the wf_item_activity_statuses is greatly reduced with the streamlined flows.

Additional activities can be eliminated based on customer's business scenarios, e.g. if customer does not use manufacturing and only sources items from stock, you can also delete the activity – Branch on Source Type & only keep that part of line flow after this activity that was for the result of 'Stock'.

Improves: All Order Processing Times (Sales Order Form, Order Import, Process Order API, Concurrent Programs that process Workflow Activities in Order or Line Flows).

9. Deferring Tax Calculation

With Order Management Pack G, users can now setup the TAX calculation point on Order Type. If they set it to INVOICING then OM will defer the tax calculation and users will see improvement in saving order lines.

This step has a few disadvantages – credit check would not include tax values. Also no TAX amount will be shown for these orders when opened in Sales Order pad. For order import customers with high volumes, it is common to print tax directly on invoices and not necessarily display it in Order Management.

Improves: Order Line Processing Times (Sales Order Form, Order Import, Process Order API)

10. Associating Receivables Transaction Type with Order Line Types

Please make sure that you specify the "Receivables Transaction Type" for each line type setup in OM. This reduces the overhead in Tax defaulting and Tax calculations.

Improves: Order Line Processing Times (Sales Order Form, Order Import, Process Order API)

11. Use default sales order form folder

Customers should try to use the default sales order form where possible. Customized folders result in overhead in the sales order form processing times.

Improves: Time in all actions from Sales Order Form

12. Pricing Setup Tips

In OM sales order form, when you type in item, quantity and tab out, 'PRICE' event is fired; When you navigate out of the line, 'LINE' event is fired; when you save the order, 'ORDER' event is fired. When you book the order, 'BOOK' event is fired. Here are some tips:

- a. For advanced pricing users: if you want to add your own phases or change the event/phase mapping, do not attach the same phase to different events. For example, if you add a phase both to 'LINE' event and 'ORDER' event, all the modifiers in this phase will be evaluated twice: during line navigation and during saving, which unnecessarily slows your application.
- b. If you want fast response when navigating between lines, minimize your modifiers in phases that are attached with 'LINE' event. For example, change your modifier from 'List Line Adjustment' phase to 'All Lines Adjustment' phase.
- c. If you constantly change your modifiers set up, define your modifiers in a way that you can easily deactivate the modifiers. For example, if you define 10 modifiers in a single modifier list, even though 9 of them got end dated later, the Pricing Engine will still need to evaluate the 10 modifiers. Instead, if you define them into two modifier lists of 5 modifiers each, you can inactivate one of them, Pricing Engine will only need to evaluate 5 modifiers.
- d. Please do not put 'Line Group' level modifiers into a phase attached to 'LINE' event. If you need to enter many lines and save multiple times, you may want to put 'Line Group' level modifier into 'BOOK' event instead of 'ORDER' event. This is to delay your 'Line Group' level modifier to be evaluated until you have entered all of your lines.

Additional patches to OM performance have been released since Family Pack I. The performance patches listed below are all in Order Management Family Pack J. We could consider applying some of these as one-offs if we are experiencing the performance scenarios that they address. Please review:

Patches included in Family Pack *J*

Oracle Order Management:

- 2830725 – Poor performance in Order Import due to query using non-mergable view wsh_carrier_ship_methods_v
- 2947123 – Poor performance when selecting the Lines tab in the Order Organizer
- 2985278 – Improvement in Credit Checking performance when 'Exclude Lines on Hold' is chosen
- 2997189 – Poor performance when tabbing into the Price List field on the sales order line
- 3015723 – Ship Method LOV performance is bad
- 3028920 – Improved performance of queries in Find Orders window in Order Organizer
- 3081934 – Copy Order performance is slow
- 3262308 – This patch is useful for improving performance in Order Import where there are a mix of very large and small orders. It will prevent the small orders from waiting on the large orders to complete.



- 3277322 – Update or Mass Change to sales orders (200+ lines) causes the system to hang
- 3391264 – Poor performance with defaulting of deliver to org for customer with many locations
- 3535178 – Slow performance when Booking an order

Oracle Advanced Pricing:

- 2832588 – Full table scan on OE_PRICE_ADJUSTMENTS table during Order Import
- 3081282 – Poor performance while creating header qualifier on a new modifier
- 3630815 – Full table scan on OE_PRICE_ADJUSTMENTS table while saving a sales order
- 3768292 – Poor performance saving a Pricing formula

Mike Speights, Solution Beacon

Vendor Corner: Compliance: Understanding and Managing Controls within Oracle's E-Business Suite

The Sarbanes-Oxley Act of 2002 has brought sweeping changes into the audit community compelling auditors and IT managers to examine the control practices within their accounting departments and to evaluate and implement strict control methodologies within their enterprise applications. The design, implementation, and sustainability of internal controls is more important than ever to ensure completeness and accuracy of financial statements. Control gaps in one module of an ERP system may directly influence transactions, data or reporting in another module on a real-time basis. As a consequence, there is an even greater need for risks and controls to be continuously monitored and managed.

Companies have incurred huge expenses in the millions of dollars to ensure their first year of compliance with Sarbanes-Oxley Sections 302 and 404 often through large teams of internal and external consultants. ERP solutions, such as Oracle, complicate the successful implementation of an internal control framework due to the pervasive and increasingly integrated nature of ERP systems and the underlying relational database in a business. Application and general IT controls are embedded within the ERP software making identification and testing complex and time consuming.

How will your company continue to comply and maintain the enormous amount of documentation of controls and perform all the necessary testing for each quarter and year following? How will your company ensure users have access to the correct functionality within the environment or restrict access at the field level so no security breach occurs? Are all of your procedures documented and managed through a controlled process to ensure users follow planned and well thought out procedures?

Managing Application Controls



In order for enterprise software to work across all industries and provide comprehensive functionality for all organizations, ERP packages are designed to be highly configurable; most “changes” or configurations are done by end-users or administrators, without requiring developers to customize source code. Therefore, applications are built with literally thousands of ways to customize and change the “behavior.” These configurations (“Application Setups” in Oracle E-Business Suite terminology) enable an organization to alter the behavior of standard processes to meet the specific needs of the business without changing underlying application code. Setup data include controls such as 3-way matching tolerances, inventory lot controls, and even master file data such as customer credit limits. Setups embedded within the Oracle E-Business applications are application controls as recognized by COSO and COBIT and must be monitored to ensure effective operation throughout the entire period.

General IT controls in the E-Business Suite

General IT controls are embedded within ERP software, like Oracle, and can be challenging to manage and review. Unfortunately, not all of the general IT controls are automated or managed by the system itself. Some controls require procedures to be developed or automated solutions to be deployed to maintain tight controls over change in the environment. General IT controls within the enterprise environment are:

- User access and security (segregation of duties)
- Data access controls enforced by the user interface
- System development (code promotion) and change management (configuration management)

Applimation's Integra Solution was specifically designed for the Oracle E-Business suite to automate the management of controls within the application. *Integra* provides extensive functionality that allows you to deploy the right balance of prevention, detection and monitoring controls crucial for you to comply with the Sarbanes-Oxley Act. *Applimation Integra* consists of the following five components to monitor both application and general IT controls within the ERP environment.

Application controls: Controls embedded in business process applications

Integra Apps: To achieve control over the enterprise application environment, organizations must document and monitor change within configurations and controls. *Integra Apps* documents, compares, and continuously monitors application controls embedded in the Oracle E-Business Suite. Continuous monitoring captures all changes to critical controls and configurations, thereby creating a comprehensive audit trail. This complete historical record, together with real-time alerting, is imperative for enforcing compliance with defined standards.

Integra Transaction: Auditing the Oracle ERP environment often requires deploying IT resources to both provide sample data and identify data anomalies across large volumes of data. Collecting a quality sample from transactional data is difficult given the volume and complexity of data in the E-Business Suite. *Integra Transaction* provides

sample and testing data as well as automated notifications for data anomalies without the need to engage IT resources.

General IT controls: Access security and change management

Integra Access: Security and user access in enterprise applications are complex and difficult to evaluate due to the complex architecture of Users, Responsibilities, Menus and Forms. *Integra Access* automates the evaluation of user access to the E-Business Suite and identifies any segregation of duties (SOD) conflicts that cause security risks or breaches. Additionally, *Integra Access* provides workflow capabilities to prevent SOD issues from occurring.

Integra Forms: One of the best ways to ensure compliance is to restrict access to sensitive data; however, changing user interface (form) behavior in the E-Business Suite typically requires a developer to modify source code. *Integra Forms* eliminates this requirement by enabling you to alter a form's behavior through a simple GUI that's tightly integrated with the E-Business Suite. Restricting access to sensitive data, changing field prompts to match corporate terminology, and tracking changes at the field level are examples of functionality to leverage from *Integra Forms*.

Integra Codebase: Even though enterprise software is highly configurable, invariably organizations deploy customizations to satisfy all business requirements. *Integra Codebase* provides efficient management of application code by documenting, comparing, monitoring and versioning of source code. Additionally, *Codebase* manages the promotion of code through the environment hierarchy, thereby ensuring that only appropriate changes are propagated to production.

Automate Your Controls

Software solutions available in the market today provide automated documentation, prevention, monitoring and testing of your organizations key controls. Automation of controls and testing is the only sound and reliable method to ensure the hundreds and thousands of hours of manual work ensuring compliance with Sarbanes-Oxley doesn't need to be repeated every quarter. You can detect and fix control weaknesses, prevent new ones from occurring and maintain audit-readiness. This will allow you to streamline your audits (internal and external), cut costs and drive your competitive advantage as you efficiently manage your compliance efforts.

Applimation provides software to help organizations achieve compliance. To learn more about compliance automation through software solutions, contact us at www.applimation.com.

Applimation

Book Offer: "Installing, Upgrading and Maintaining Oracle Applications 11i" is Still Available!

To order your copy of "Installing, Upgrading and Maintaining Oracle Applications 11i (or, When Old Dogs Learn New Tricks)" visit our website or order your book at

<http://www.oncalldb.com/docs/Books/?&L=sb>

Barbara Matthews, OnCallDBA, Karen Brownfield, John Stouffer and Randy Giefer, Solution Beacon

OAUG: Events in the News

OAUG and Quest Announce They Will Collaborate on Annual Conferences

The Oracle Applications User Group and Quest International Users Group announced recently that OAUG Connection Point™ 2005 and the Quest Conference & Expo 2005 will be held together at the Gaylord Texan Hotel and Convention Center, June 13-16, in Grapevine, Texas. The conference is part of a new strategic alliance between OAUG and Quest that was formed in January.

Additional information about the joint conference is available at www.oaug.org/conferences/2005/cxnpttexas.

OAUG PeopleSoft / J.D. Edwards Survey

In order to better serve our membership, the Oracle Applications Users Group (OAUG) is conducting a brief survey to determine how many of our members currently use PeopleSoft or J.D. Edwards products.

Thank you in advance for your survey participation and feedback.

Please click on the link below to begin the survey.

<http://www.zoomerang.com/survey.zqi?p=U23HD23BR3XM>

The Trail to TexasSM

The *Trail to Texas*SM kicked off at the NorCal OAUG 2005 Training Day on March 7 in San Ramon, California. In addition to the 6 Technical presentations by Randy Giefer and Kevin Dahl of Solution Beacon, there were 42 other presentations, 30 Exhibitors, and more than 400 Northern California Oracle Application Users sharing information and experiences.

Congratulations to **Grant Newcomer** of **Zenith Insurance**! Grant is the winner of the drawing from attendees at the NorCal OAUG *Trail to Texas*SM for a free registration to OAUG Connection Point 2005.



The *Trail to Texas*SM continued in Worcester, Massachusetts, at the New England OAUG. In addition to the presentations by Karen Brownfield, James Jones, Ronda Ellis, and Rob Gonsa of Solution Beacon, NEOAUG offered 29 other presentations and break out sessions, 12 presentations from Oracle, a Keynote address by Amit Singh, Area Vice President for Oracle and numerous Exhibitors for the more than 450 New England Oracle Application Users to share information and experiences.

Congratulations to **Joe Wilson** of **NetScout Systems, Inc.**! As an attendee of the *Trail to Texas*SM workshops at the New England OAUG on March 21, Joe was the winner of the drawing for a free registration to OAUG Connection Point 2005.

Jerry Ireland of **Rightsizing, Inc.** and **Paul Robinson** of **Fallon Clinic** were each winners of a copy of the book "Installing, Upgrading and Maintaining Oracle Applications 11i (or, When Old Dogs Learn New Tricks)" included in the drawing at NEOAUG.

OAUG Enhancement Request System Pilot a Resounding Success

The OAUG Board of Directors and Oracle Corporation are pleased to announce that the pilot program for the OAUG Enhancement Request System (ERS) has been a resounding success. The goal of the pilot was to comprehensively test the new system with live enhancement data from two specific product areas: Self-Service Human Resources and Oracle Order Management. During the course of the four-month pilot, the ERS received 205 enhancement requests for Self-Service Human Resources and 71 enhancement requests for Oracle Order Management. More information about the pilot, as well as instructions for submitting enhancement requests can be found on the OAUG Web site at www.oaug.org/enhancements.

Robin Dahlen, for Meeting Expectations and Alicia Hoekstra for Solution Beacon

Solution Beacon News

Jerry Hermes has joined Solution Beacon as Director of Services & Delivery. Jerry has over 30 years of experience using information technologies and processes to accomplish strategic business objectives. His past achievements have included the successful integration of new technologies and processes into existing global enterprises as well as startups. Other areas of expertise include service delivery, risk management and staff management. Jerry has served as a Director and Principal Consultant for Xansa, Merant and Micro Focus. In addition, he was a Research Director for IDC Government. Jerry can be reached at jhermes@solutionbeacon.com. We're excited to have Jerry as part of the Solution Beacon management team.

Art Dowd, Solution Beacon



Upcoming Solution Beacon Events

EVENT	DATE	LOCATION
DOUG Apps Forum – <i>Presentation And Discussion On Improving Material And Production Planning</i> , David Tipping, Solution Beacon	April 8, 2005	Dallas, TX
HOUG – <i>Workflow for End Users</i> , Ronda Ellis, Solution Beacon	April 20, 2005	Houston, TX
SROAUG Conference – <i>Trail to Texas Workshops</i>	April 22, 2005	Los Angeles, CA
CSOAUG Conference – <i>Trail to Texas Workshops</i>	April 25, 2005	St. Louis, MO
IOUG Live! 2005 Conference	May 1-5, 2005	Orlando, FL
IOUG Live! – <i>Trail to Texas Workshops</i>	May 4, 2005	Orlando, FL
DOUG – <i>Supporting Release 11.5.10</i> , John Stouffer, Solution Beacon	May 13, 2005	Grapevine, TX
OAUG Connection Point 2005	June 13-16, 2005	Grapevine, TX
OAUG Connection Point 2005 – <i>Trail To Texas Workshops</i>	June 14, 2005	Grapevine, TX
OAUG Connection Point 2005 – <i>Secrets of the Account Generator</i> , Karen Brownfield, Solution Beacon	June 13-16, 2005	Grapevine, TX
OAUG Connection Point 2005 – <i>Enterprise Planning and Budgeting</i> (Panel), Okey Bess, Solution Beacon	June 13-16, 2005	Grapevine, TX
OAUG Connection Point 2005 – <i>Applications DBA 101 – The Basics of A Successful Implementation</i> , Eric Cole, National Institutes of Health, and John Stouffer, Solution Beacon	June 13-16, 2005	Grapevine, TX
OAUG Connection Point 2005 – <i>Best Practices for Securing the Oracle E-Business Suite</i> (Panel), Randy Geifer, Solution Beacon	June 13-16, 2005	Grapevine, TX
OAUG Connection Point 2005 – <i>FSGs Made Simple</i> (Training Session), Ronda Ellis, Solution Beacon	June 13-16, 2005	Grapevine, TX
OAUG Connection Point 2005 – <i>Care and Feeding of Oracle Workflow</i> (Training Session), Karen Brownfield, Solution Beacon	June 13-16, 2005	Grapevine, TX
ODTUG NOW 2005 – <i>Developing Forms Extensions for Oracle E-Business Suite Customers</i> , Susan Behn, Solution Beacon	June 18-22, 2005	New Orleans, LA
Oracle OpenWorld	September 18-22, 2005	San Francisco, CA

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