Release 11*i* Newsletter

Oracle Applications Services | Volume 18 | May 2004

Oracle Applications Release 11*i* 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 11*i* that we have performed for our clients. We also welcome your participation in this newsletter. If you would like to contribute on any Release 11*i* topic, please send your contact information, topic, and a short abstract to mweiss@solutionbeacon.com.

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

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OAUG: Success Through Education

ORACLE APPLICATIONS & TECHNOLOGY SYMPOSIUM (OATS 2004)

The Oracle Applications Users Group (OAUG) and the Ohio Valley User Group (OVOAUG) are co-hosting the Oracle Applications & Technology Symposium on May 25-26, 2004 at the Hyatt Regency in Cincinnati, Ohio. This event is designed to maximize your knowledge, experience and understanding of Oracle Applications and will provide a forum to discuss issues that affect your organization.

The Oracle Applications & Technology Symposium will feature multiple tracks and more than 20 sessions that will provide the latest information on how to:

- Increase your quality of service
- Strengthen your architecture for maximum performance
- Minimize IT cost

For more information or to register, please visit the OAUG Web site at
http://www.oaug.org/eblasts/2004-05-13OATS.html

NEXT STOP: OAUG OATS CINCINNATI For *THE ROAD TO ORLANDO*[sm]

The OAUG and Solution Beacon have teamed up to bring you *The Road to Orlando*[SM]. Get a head start on the great educational and networking opportunity of OAUG Connection Point 2004 by attending one of the Release 11*i* Workshops coming to multiple cities prior to the conference in September in Orlando.

The *Road to Orlando*[SM] started in Dallas on April 23, 2004. This one-day event, co-hosted by South Central OAUG, featured two tracks covering functional and technical topics, including New Features in Financials, Supply Chain, Projects, Manufacturing, and Human Resources and Payroll, as well as Change Management and Care and Feeding of Release 11*i*.

Cindi Stein of Orthofix attended the Dallas event and stated "*I attended the Solutions Beacon Road to Orlando technical seminar. John Stouffer is recognizably one of the very top experts in knowledge of the Oracle 11i Apps. The seminar provides great insight as to the changes that will*

occur in the role of DBA with the 11i Apps. John knows all the pitfalls of Release 11i and how to handle them."

The next stop is in **Cincinnati on May 25-26** at the 2004 Oracle Applications and Technology Symposium (no additional charge for OATS attendees).

Kicking off each day are breakfast presentations for senior managers – an Executive Round Table – "Maximizing Release 11*i* ROI," sponsored by Mercury Interactive and Ringmaster Software. A testimonial on the executive breakfast from Jeff Hook of Fellowship Technologies states that "*The presentation was very informative concerning what to really expect from Oracle these days. As the Oracle applications product line matures, including all of its underlying technical components, many new issues arise that cannot be ignored. And like many other issues involving product evolution, and sometimes obsolescence, careful planning is the only way to address without allowing yourself to get painted in a corner. Solution Beacon clearly appears to have a grasp of not only the issues, but how to plan accordingly and then execute.*" For more information about the executive breakfast and registration please visit:

http://www.oaug.org/eblasts/2004-04-13SB-RTO.html

The Road to Orlando[SM] then continues on to Phoenix (June 4), Los Angeles (June 11) Denver (June 24), Washington D.C. (July 16), Atlanta (July 23), and Portland (July 27), and will conclude in Orlando on September 12-15.

For more information, visit **www.solutionbeacon.com**, **www.oaug.org** or e-mail **SBPresentsRTO@solutionbeacon.com**.

Chuck Meyers, William Mills Agency for OAUG, Mary Lou Weiss and Randy Giefer, Editors, Solution Beacon

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Ask the SB Experts

Question: *I need to know the minimum Hardware and software requirements for installing / upgrading Oracle Applications 11i (11.5.8) on Sun Solaris. Can you give me the details of the following:*

Hardware requirements:

- *i) Hardware requirements for install / upgrade the Oracle Applications like no. of cpu, processor, ram, disk space, etc.,*
- *ii) Operation System patches need to install before we proceed for upgradation.*
- *iii) Additional softwares / tools are required to installed for upgrading oracle applications.*
- *iv) Other softwares like perl, java, Apache etc.*

Software requirements:

- *i) Oracle software like forms, developer etc.*
- *ii) JDK – version*
- *iii) Open Motif*

Answer: I would only use the 11.5.9 Release information – 11.5.8 is way out of date.

Try the following links on Oracle's MetaLink site:

http://metalink.oracle.com/metalink/plsql/ml2_documents.showNOT?p_id=232833.1
http://metalink.oracle.com/metalink/plsql/ml2_documents.showNOT?p_id=234781.1

Question: *We have an instance in another country that we want to separate out the forms and reports servers to another server and we haven't found any documentation to do it or a methodology. It's 11.5.7 AutoConfig enabled. Any ideas?*

Answer: Use Rapid Clone to clone services from one tier to another. You can specify the server type (forms, reports, etc.) of each target node while answering the prompts during the rapid clone configuration. How to disable the services on the original node(s) involves using the context editor to change the configuration definition on each node. Look for an article in a future newsletter to get more details on this subject.

Question: *What is the 'realistic' minimum desktop pc requirement for a person who needed to run Oracle Apps, Discoverer, and Business Intelligence. Can you help me out on this?*

Answer: The minimum desktop requirements and then what Solution Beacon (SB) recommends:

Minimums	***SB Recommends***
600MHz+ for CPU	1 GHz + for CPU
256MB for Memory	512MB for Memory

Question: *Just talked with someone who asked me if they could run 11.5.3 on Oracle9i? They want to get off Oracle8i and move to Oracle9i to be supported, but they do not want to touch their apps unless they have to. Thoughts?*

My personal thoughts are that they have to do the regression testing at a minimum, but I was curious if the tech stack can even work together?

Answer: No. You can only run 11.5.7, .8 and .9 against 9.2.0.X (up to 9.2.0.5 which was just certified).

11.5.3, .4, .5 and .6 are only certified for Oracle8*i* (8.1.7.4) and not even 9.0.X (which sometimes also gets referred to as Oracle9*i* but was de-supported).

Basically, if you are not on 11.0.X or 11.5.7+, you're not supported after the end of the year.

Please see Oracle*MetaLink* document 216550.1, *Interoperability Notes: Oracle Applications Release 11i with Oracle9i Release 2 (9.2.0).*

Desupport Information:

- **RDBMS 8.1.7:** E-Business Suite 11*i* customers (with certified combinations) running against 8.1.7.4 will remain supported until **01-January-2005**.
- E-Business Suite 11.0.3 customers (with certified combinations) running 8.1.7.4 Applications databases in Split Configurations will remain supported for the supported life of E-Business Suite 11.0.3. (See 8.1.7's desupport notice for further details.)

- **RDBMS 8.0.6** was desupported 30-SEP-2001. E-Business Suite customers (with certified combinations), and the underlying Technology Stack, running 8.0.6 client code in Split Configurations will remain supported until further notice.
- **RDBMS 7.3.4** was desupported 31-DEC-2000. E-Business Suite customers (with certified combinations) running 7.3.4 client code in Split Configurations will remain supported until the 10.7 desupport date of **30-JUN-2003**. See Extended Support will be available for 10.7. for further information

Question: *Have a question. Please help me if you can. We are planning to migrate 11i(11.5.4) from HP machines to SUN machines. We are not planning to upgrade at this time. What would be the steps I should follow for this migration? There is very little help or no help at MetaLink. Any online documentation or links would be helpful.*

Answer: The only way to migrate from HP to Sun is to do a full database export/import (I'm assuming you will still be on 8i). Oracle has written some documentation on this hideous task, as they have issues with successfully exporting/importing with *11i*.

I've culled this information from our book, "Installing, Upgrading and Maintaining Oracle Applications 11*i*", hoping it might be useful:

Full database export/imports are, in fact, not as simple as they used to be. If you decide to do full database exports, you should carefully review MetaLink Note 204015.1, "Export/Import Process for Oracle Applications Release 11*i* Database Instances". If you are running on Oracle9*i*, you should review MetaLink Note 230627.1, "9*i* Export/Import Process for Oracle Applications Release 11*i*". Among the many considerations that you'll have to account for are:

1. You need to be on the latest AD MiniPack on your source Applications System.
2. You have to apply the Applications consolidated export/import utility patch.
3. You may need to apply the latest Materialized Views patch if your source environment is using either Release 11.5.6 or 11.5.7.
4. You have to apply the latest Applications database preparation scripts patch.
5. If you haven't already done so and are running from an 11.5.8 Rapid Install, you need to apply the latest Rapid Install patch.

If you need to migrate your Applications from one operating system to a different operating system, full database export/import is your only option. Given the number and complexity of steps, you should approach this option with considerable upfront testing.

This is a very tedious and complex process. Also, don't forget that you will also have to manually "sync" up any software patches to the 11.5.4 environment on the HP (ORACLE_HOMES, APPL_TOPS, JAVA and HTML) to the appropriate SUN version.

The good news is that 11.5.4 had a lot less Java embedded in the database. In 11.5.7 and above, the Java in the database is specific to the platform. This gets very interested when the underlying platform is changed.

Question: *I haven't been tracking 11.5.10, so if anyone has any information on that, let me know.*

Answer: Not much on 11.5.10 except for the presentation from 10-May-2004:

Generic Note Oracle E-Business Intelligence 11.5.10 Release Content Documents Document **264444.1**

And a little bit about a new User Management module (UMX) in MetaLink Note ID 189367.1.

Question: *We are thinking of upgrading to R11.5.9. What changes are necessary for the technology stack?*

Answer: From Oracle's MetaLink website (bold is SB emphasis) under the E-Business 11*i* tab:

New 11*i* customers: Customers conducting a fresh install of the 11*i* E-Business Suite should install the Oracle Applications 11*i* Release 9 CD Pack. The CD Packs contained the latest certified technology components at the time of creation. **Although the Applications code is the same, customers who start their 11*i* implementation with the Oracle Applications 11*i* Release 9 CD Pack will end up with a different technology stack than those customers who upgrade their 11*i* environments from an earlier 11*i* release via the 11.5.9 Maintenance Pack.**

Existing 11*i* customers: Customers already on other versions of 11*i* (i.e. 11.5.1-11.5.8) are encouraged to apply the 11.5.9 Maintenance Pack directly to their 11*i* environments. **Please note that Maintenance Packs do not update your technology stack, nor is a technology update strictly necessary.** However, it is advisable to remain "current" on technology, as technology has a different support lifecycle than the Applications code.

While Oracle states above that a technology update is not "strictly" necessary, please note the following statements included in the 11.5.9 Maintenance Pack document (232834.1):

Install and run the Release 11.5.9 technology stack validation utility
Apply the Release 11.5.9 technology stack validation utility patch, 3159620, on all application tier server nodes. This utility will verify certain minimum technology component versions and other configuration requirements of the Release 11.5.9 Maintenance Pack. Instructions for running the utility are included in the README.txt file of the patch that delivered it.

If any failures or warnings are reported, the utility will provide instructions on how to fix each problem. Once the problems have been fixed, run the utility again on each node that had a problem to ensure that no problems remain. Every failure must be corrected on each node before continuing with the maintenance pack installation; it is highly recommended that every warning be corrected as well.

Technology Stack Component Versions

The Release 11.5.9 technology stack validation utility ensures that your Oracle technology stack components meet minimum required versions for use with Release 11.5.9 before the

maintenance pack is applied. However, it is advisable to keep the technology stack components up-to-date, beyond the minimum required versions, because they have different support lifecycles than that of the Applications. Also, later versions of technology stack components sometimes deliver new features that are beneficial to users of the Applications. This is why each release of the Rapid Install is delivered with the latest certified technology stack component versions at the time of its creation."

The Senior Consultants at Solution Beacon, LLC

Small Bug in FIN_PF.E

Looks like there is a bug in FIN_PF.E (2842697). When applying, I noticed the following error in the *.lgi file:

```
WARNING:  'GL' is not a recognized product. The following entry is now
disabled:
exec fnd bin FNDLOAD bin &phase=daa+52
checkfile:gl:patch/115/import/US:b2835054.ldt &ui_apps 0 Y UPLOAD
@FND:patch/115/import/afmdmsg.lct @GL:patch/115/import/US/b2835054.ldt
```

Change @GL to @SQLGL in the u2842697.drv

Jeff Holt, Solution Beacon, LLC

Why You Still Need to Upgrade 11.5.9's Oracle9*i* to the Latest Oracle9*i* Version

In a similar March 2004 Solution Beacon newsletter article, it was pointed out that Oracle Applications version 11.5.9 is delivered with Oracle9*i* version 9.2.0.3. That same article recommended upgrading from 9.2.0.3 to version 9.2.0.4 because a significant number of bugs were corrected in that version. In late April of this year, Oracle database version 9.2.0.5 (patch 3501955) was certified for use with Oracle Applications version 11.5.9.

Upgrading to the latest certified Oracle9*i* version *is also recommended* in this article. MetaLink note 263791.1 provides a comprehensive list of the issues addressed by this version of Oracle9*i*. In fact, the note covers about 87 pages (depends on the text size in your browser) of bugs that are "over and above" those fixed in versions prior to 9.2.0.5. The sheer number of bugs corrected *would be ample justification* for upgrading. The bugs cover 9 major categories:

- **Symptom** – This category would include such sub-categories as: hanging processes, memory leaks, instances crashes, etc. (29 sub-categories in all).
- **Task Related** – This category would include such sub-categories as: instance startup issues, recovery problems, etc. (4 sub-categories in all).
- **SQL commands / features used** – This category would include bugs in the SQL engine. (20 sub-categories in all)

- **How things are Stored / Defined** – This category would include such sub-categories as: indexes, external tables, space management, etc. (12 sub-categories in all)
- **Net / Connectivity / Authentication / Distributed** - This category would include such sub-categories as: secure networking, ODBC, distributed transactions, etc. (12 sub-categories in all)
- **Database Options / Major Features** - This category would include such sub-categories as: standby database, real application clusters, transportable tablespaces, etc. (21 sub-categories in all)
- **Programming Languages** - This category would include such sub-categories as: JDBC, PL/SQL, XML, etc. (10 sub-categories in all)
- **Product Related** - This category would include such sub-categories as: RMAN, SQL*Loader, SQL*Plus, etc. (10 sub-categories in all)
- **Miscellaneous** - This category would include large file issues, NUMA and other miscellaneous bugs

To perform the upgrade, in the context of Release 11*i*, see MetaLink note 216550.1, Interoperability notes Oracle Applications Release 11*i* with Oracle9*i* Release 2, for details on how to either upgrade to release 9.2.0 or upgrade your current Oracle 9.2.X version to the most recently certified 9.2.0 patchset (9.2.0.5).

Kevin Dahl, Solution Beacon

Oracle Applications Tablespace Model (OATM) Migration

The Oracle Applications Tablespace Model (OATM) offers significant improvements in manageability and space utilization. Simply put, OATM reduces what would typically be over 300 dictionary managed tablespaces to just 12 locally managed tablespaces.

OATM will be an integral part of Oracle Applications release 11.5.10, but has been made available via patch 3381489 for environments running minipack 11*i*.AD.H or higher and RDBMS version 9.2.0.4 or higher.

We do recommend that you patch to 9.2.0.5 to address bug 3024309 relating to the refresh of materialized views after the migration of their underlying tables. You will not find this bug using the bug search utility in MetaLink because it is viewed by Oracle as an enhancement. You can find it however if you simply search from the MetaLink home page.

More detail on OATM can be found in the following MetaLink documents:

Oracle Applications Tablespace Migration Utility User Documentation	269291.1
Oracle Applications Tablespace Model Release 11i - Tablespace Migration Utility	248857.1
Oracle Applications Tablespace Model FAQs	269293.1
New Oracle Applications Tablespace Model and Migration Utility	248173.1

There are 12 tablespaces in a standard OATM deployment:

Tablespace Type	Tablespace Name	Contents
Transaction Tables	APPS_TS_TX_DATA	Tables that contain transaction data
Transaction Indexes	APPS_TS_TX_IDX	Indexes on transaction tables
Reference	APPS_TS_SEED	Reference and set-up data and indexes
Interface	APPS_TS_INTERFACE	Interface and temporary data and indexes
Summary	APPS_TS_SUMMARY	Summary management objects, such as materialized views, and other objects that record summary information
Nologging	APPS_TS_NOLOGGING	Materialized views not used for summary management and temporary objects
Advanced Queuing (AQ)	APPS_TS_AQ	Advanced Queuing and dependent tables and indexes
Media	APPS_TS_MEDIA	Multimedia objects, such as text, video, sound, graphics, and spatial data
Archive	APPS_TS_ARCHIVE	Archive-purge-related objects
Undo	UNDO	Automatic Undo Management (AUM) tablespace. UNDO segments are identical to ROLLBACK segments when AUM is enabled
Temp	TEMP	Temporary tablespace for global temporary table, sorts, and hash joins
System	SYSTEM	System tablespace

There are explicit and implicit methods of classification. Explicit object-tablespace type classifications are seeded by Oracle for applications objects. With the OATM migration tool, you have the ability to explicitly classify custom objects prior to migration (see Step 2). Implicit classifications occur for the following objects based on object type:

Object Type	Tablespace_Type
AQ Tables	AQ
IOTs (Index Organized Tables)	Transaction_Tables
Materialized Views	Summary
Materialized View Logs	Summary
All other Indexes	Same Tablespace type as the table
Domain Indexes	Transaction_Indexes
Indexes on Transaction Tables	Transaction_Indexes

Migration Steps

There are two primary strategies when migrating your tablespaces: all at once or a select few at a time. It is simpler to migrate all of them at once. However, there are tradeoffs. Migrating all of them at once requires a significant amount of disk space – approximately twice that of what is currently being used – and may take more time than you have available in your maintenance window. However we feel that the simplicity of the wholesale migration overrides these issues and we recommend that you pursue the path of a single migration pass for all tablespaces. This is the process outlined below.

Step	Action	Type	Doc 269291.1 Step	Can Users be on the System?
1	Backup Database	Cautionary	-na-	Maybe
2	Execute Migration Script	Preparatory	-na-	
3	Run Customization Steps	Preparatory	7	Yes
4	Generate Migration Sizing Reports	Preparatory	1	Yes
5	Create New Tablespaces	Preparatory	2	Yes
6	Generate Migration Commands	Preparatory	3	Yes
7	Backup Database	Cautionary	-na-	Maybe
8	Execute Migration Commands	Migratory	4	No
9	Run Migration Status Reports	Migratory	5	No
10	Run Post Migration Steps	Post-Migratory	6	No

1. **Backup Database**

   Should your tablespace migration effort go awry, a backup of the database utilizing your original tablespace layout will prove invaluable.

2. **After the backup has been taken, execute the tablespace migration utility PERL script (supplied by patch 3381489):**

   ```
   FND_TOP/bin/fndtsmig.pl
   ```

3. **Step 7: Run Customization Steps**

   Oracle labels this step as "optional". However, almost every Oracle Applications installation contains customizations of some sort requiring the use of a tablespace or two.

   There are options for registering new tablespace types, changing the name of existing tablespaces, registering object classifications and changing object classifications. Our recommendation is simply to register your custom object classifications.

   a. **Select Option 3: Register Object Classification**

   You will need to register each custom table and index by specifying the application short name, object name and tablespace type. For example:

   ```
   Enter the application short name:  XXXX
   Enter the object name:  XXXX_CUSTOMER_TYPES
   Enter the tablespace type:  REFERENCE

   Tablespace type REFERENCE for object XXXX_CUSTOMER_TYPES registered.

   Do you want to continue registering tablespace types for other
   objects?[Y]:
   ```

   Continue registering all of your custom objects. Once complete, move on to the next step.

4. **Step 1: Generate Migration Sizing Reports**

   Since we will be doing a wholesale migration of the existing tablespaces in this exercise, we will be selecting Option 1.

   a. **Select Option 1: Calculate Total Space Required by Each New Tablespace to Migrate all Oracle Application Product Schemas**

b. **When asked whether or not you want to run the sizing program, specify Y.**
c. **Specify A for the Extent Allocation Type to indicate auto-allocation of extents. If you prefer uniform extents, enter U and specify a uniform extent size in Kbytes.**

The report *fndtrep1.txt* will be generated, which displays the total space required for each new tablespace once migrated. Keep this report handy as this information is needed later on in the process.

Make sure you have the required disk space to do a migration of all tablespaces at once. If there is not enough space to do so, you need to reference MetaLink Note 269291.1 for instructions on how to migrate in several passes.

For sizing exceptions, select Option 4: Display Sizing Error Report. Enter % to see the information for all schemas. The information will be captured in report *fndtrep5.txt*.

5. **Step 2: Create New Tablespaces**
   a. **Select Option 1: Generate the Tablespace Creation Script**
   b. **Enter A or U for the extent allocation type. Specify the same value you used when generating the sizing reports.**
   c. **Enter the directory in which to store the datafiles (i.e., /u01/oradata)**
   d. **You will then be prompted for the number of datafiles for each tablespace as well as the total amount of space required in MB. Be sure to use the same values (or larger) as specified in the sizing report to avoid having to resize during the migration.**
   e. **Select Option 2: Create New Tablespaces. This will execute crtts.sql, which was created with Option 1.**
6. **Step 3: Generate Migration Commands**
   In this step you will be generating the commands required to migrate your tablespaces. The commands will be stored in the table FND_TS_MIG_CMDS.

   a. **Select Option 1. Invalid Indexes Report**

      The report *fndinvld.txt* identifies invalid indexes that need to be repaired before the migration can proceed.

   b. **Select Option 2. Generate Migration Commands for All Schemas**

      Check out the log file *fndgmcmd<timestamp>.log* for any potential errors.

   Do not generate any migration commands if you have already generated the commands and your migration is in progress.

7. **Take a Backup**
8. **Step 4: Execute Migration Commands**
   You have finally reached the point of migration.

   a. **Select Option 1. Execute Migration Commands for All Schemas**

You will be prompted the maximum number of parallel processes. The default of **4** is fine for the first pass in your test environment.

All constraints, triggers and policies are disabled and all queues are stopped at this point. Check the following log files for errors generated during the migration process:

```
fndmlong<timestamp>.log
fndemseq<timestamp>.log
fndemcmd<timestamp>.log
```

Be patient, it takes a while. Expect something in the neighborhood of 30GB an hour on a typical system on your first pass. Remember, the backup you just took? Feel free to restore and try various numbers of parallel processes to see what the impact on performance might be for your environment.

9. **Step 5: Run Migration Status Report**
   a. **Select Option 1. Run Migration Status Report**

      Just accept the default of % when asked for a schema short name. The report *fndtrep8.txt* will help you identify the status of your migration by providing information on the number of objects migrated successfully, the number of objects that errored out as well as a percent complete by schema and object type.

   b. **Select Option 2. Run Migration Error Report**

      Just accept the default of % when asked for a schema short name. The report *fndtrep10.txt* will provide detailed information on any errors generated during the migration process.

   It is safe and recommended to run the status reports regularly during the migration process in order to stay abreast of its status.

10. **Step 5: Run Post Migration Steps**
    a. **Select Option 1. Run Audit Reports**

       Just accept the default of % when asked for a schema short name. The report *fndtrep6.txt* will provide a list of objects that has not been moved to the correct tablespace.

    b. **Select Option 2: Enable the Constraints, Triggers and Policies, and Start Advanced Queues**

       This option will re-enable constraints, triggers and policies as well as re-start the queues. Accept the default of % when prompted for a schema.

    c. **Select Option 3: Re-Size Old Tablespaces**

       This option will re-size the old tablespaces based on information in the data dictionary.

    You can later drop any empty tablespaces from the database and remove the related datafiles from the operating system once the migration exercise is complete.

Conclusion

The ease of maintenance and efficiency in storage utilization make the deployment of OATM very attractive. Be sure to test the migration numerous times - optimizing the number of parallel processes, addressing any errors found and understanding the related timeline prior to performing your migration in production. You will be glad that you did.

Will Cordle, Solution Beacon

FSG Performance Tuning

FSG (Financial Statement Generator) is an excellent tool for developing reports on balances of various accounts. Although it will not show individual journal entries, if run through ADI, it does have the ability to drill down to those entries.

As wonderful as the Financial Statement Generator is, it is possible to design reports that can take significant amounts of time to execute. When this happens, it's time to look at optimizing your environment.

1. Are all the segments of your chart of accounts indexed? From the General Ledger Setup menu: Setup | Financials | Flexfields | Key | Segments. Query up your accounting flexfield, click on Segments, and then click open for each segment. Is the Indexed flag checked? If not, then you need to unfreeze your flexfield, click the indexed flag, save, refreeze your flexfield, then re-compile. If you are public sector and using reporting attributes, then you need to unfreeze BOTH flexfields before making any changes. Make the changes to both flexfields before refreezing or recompiling. Sometimes you will receive "Record has been changed, requery" error when changing the 2nd flexfield. If this happens, you will have to resort to SQL to change the 2nd flexfield.

   ```
   UPDATE fnd_id_flex_segments
     SET application_column_index_flag = 'Y'
     WHERE application_id = 101
        AND id_flex_code = <'GLAT','GL#'>
        AND application_column_name in (<segmentlist>);
   ```

   Segmentlist will be the segment numbers that aren't indexed, such as SEGMENT1, SEGMENT3, etc. 'GLAT' is the id_flex_code for the reporting attributes flexfield, 'GL#' is the accounting flexfield. Use the value for whichever flexfield is reporting the 'Record has been changed' error.

   After the flexfield recompiles, you MUST run the optimizer with both parameters set to 'Yes', or the new indexes will not be created.

2. Are you running the optimizer periodically? With both parameters set to 'Yes"? You should run the optimizer at least weekly, and right before your month end reports. This program gathers the stats FSG uses to determine which index to use.

3. Do you have row sets with more than one segment using the Display option 'E', or multiple rows have a Display option 'E'. There are two new profile options that can boost performance. If your system does not have these options, see MetaLink Note 189265.1 for instructions on setting these up. Note that MetaLink advises to set these options only for FSGs with the Display option 'E', and even recommends setting up a special responsibility for these reports (implying that reports without this feature will function best with the profile options set to Null).

   FSG: Debug Segment Number – should be set to 78

   FSG: Middle Points Number – set to 1, 2, 3, or 4. You will have to experiment with this setting until you find the number that works best with your environment

4. What is the value for FSG: Enable Search Optimization? For optimal performance it should be set to 'Yes'. But in complex structures (detail values have multiple parents) this can cause the dreaded Signal 10/11 errors. Oracle has added a new profile option to combat this: FSG: Hierarchy Complexity Number. (Again, if you don't have this profile option, see note 189265.1 for instructions on defining this option). Figure out the average/maximum number of parents a detail child value has, and then square it. Example: account segment – detail values have an average of 20 parents, set profile option to 20 x 20 or 400.

5. Not using UTF8 character set? Then you can set FSG: String Comparison Mode to 1.

6. Are you on the latest patch set for FSG? The Financial Statement Generator is actually part of a product module separate from GL with the code RG. MetaLink Note 189282.1 contains the latest patch set info for RG. Follow the instructions in the note. Note that for Release 11*i* customers, patch 3131449 does not have any prereqs and does a lot to increase performance. There is a second patch not mentioned in this note that should be applied also (need to ensure any prereqs are met) – 3507398.

7. Storage Parameters. Create two tablespaces <your company data> <your company indexes>. Update the storage parameters (From GL setup menu Setup | System | Storage) to reference these tablespaces instead of GLD, GLX/RGX. Increase storage parameters to 10000, 10000, 500 for the following tables: (this will help more than just FSGs).

   GL_BUDGET_INTERIM
   GL_ALOC_INTERIM
   GL_POSTING_INTERIM
   GL_SUMMARY_INTERIM
   GL_SUMMARY_INTERIM_N1
   GL_POSTING_INTERIM_N1
   GL_POSTING_INTERIM_N2
   GL_POSTING_INTERIM_N3
   GL_CODE_COMBINATION_INDEXES
   GL_BUDGET_INTERIM_N1
   GL_BUDGET_INTERIM_N2
   GL_ALLOC_INTERIM_N1

8. Make sure your DBA has created an index on GL_CODE_COMBINATIONS for the concatenated segments.

9. Make sure your row and column set calculations only reference PREVIOUS row or column sequences. For example if column 10 has the calculation 20+30, then you need to either have column 10 pull in amount types and change column 30 to calculate 10-20, or define hidden columns 2, 4 that are duplicates of 20, 30, have column 10 be 2+4, column 20 be the calculation +2, column 30 be the calculation +30. (Note, while MetaLink states that calculations referencing future rows/columns is now forbidden, the FSG's will probably still work)

10. Using Cost based Optimizer? Make sure you are running the gather all schema stats program with it set to compute.

11. Are you on the Oracle8*i* database? You really need to upgrade to Oracle9*i*. The cost-based optimizer runs much more effectively. (And the Oracle8*i* database will be desupported as of 31-DEC-2004 for all 11*i* customers, although it will still be supported for 11.0.3 customers).

If the above do not produce acceptable levels of performance, then you will need to take your tuning to the next levels.

Tune your database. Release 11*i* – As I am not a DBA, I won't even begin to speak to this topic, except that you should ensure you have conformed to the recommended init.ora parameters, your rollbacks are sized properly, your temp tables are large enough, you have the recommended memory on your processor (FSG makes EXTENSIVE use of temp table space and memory).

Summary Accounts – this is a topic requiring much greater discussion. But if you make extensive use of parents in content sets, or if you have segments with thousands of values, but in the row/column sets you leave this segment null to get all values, then you can see incredible gains in performance (hours to seconds).

Tuning starts with an analysis of your environment resulting in a written report and oral presentation detailing both the good things your company has done as well as any areas for improvement.

Karen Brownfield Solution Beacon

Database Security Causes Database Hang

We are on the Sun Solaris v5.8 platform running 11.5.9 on 9.2.0.4 + patches and have been fighting a database hang condition relating to row cache locks for some time. As part of our analysis to resolve this condition (statspack showed this as the highest wait event), we have found out that one cause of lock and latch contention problems we have been having may have been caused by security set at the database level.

In the past, several external auditors have asked us to set the APPS account to lock after five failed login attempts. This was implemented some time ago by setting failed_login_attempts in the DEFAULT profile to lock after 5 attempts.

Once we changed failed_login_attempts to unlimited for the APPS user, no further database hangs have occurred due to row cache enqueue.

We issued a TAR with Oracle Support and their response indicated the following:

- The failed_login_attempts setting should not be set for the APPS account.
- The table FND_UNSUCCESSFUL_LOGINS should be used to track failed logins since setting it at the Apps schema level is not very useful because you need to know which APPS user is failing.

So, the next time you encounter an auditor that recommends setting failed login attempts for the APPS database account please, please remember that it CAN cause the database to hang.

Keith Gruber, Solution Beacon Client

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

Solution Beacon offers a special that is sure to catch your eye – while supplies last; purchases of "Installing, Upgrading and Maintaining Oracle Applications 11*i* (or, When Old Dogs Learn New Tricks)" will come with a free copy of "Horrible Oracle". Order your copies now from www.solutionbeacon.com.

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

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Solution Beacon News

Sandra Vucinic of Solution Beacon has had her presentation "Roadmap to Successfully Migrate Oracle Apps to the Linux Platform" nominated by Central States OAUG (CSOAUG) as a submission to OAUG's Connection Point 2004 for the "Best of the Best" series. Congratulations to Sandra!

David Tipping joins Solution Beacon with more than 33 years of working with manufacturing companies, 25 of which as a consultant. His experience includes programming, systems design, testing, software quality management, implementation, documentation, and project management. He currently concentrates on the Oracle Manufacturing Application, working in the areas of material and production management and associated applications. Dave has been working with Oracle based manufacturing applications for the past 14 years and has been working directly with Oracle applications for 8 years. His project experience includes application setup, implementation, installation, upgrades, application modification design, testing,

documentation and user policies & procedures. Dave is knowledgeable in the use of automation in the management of production and materials (bar coding & RF devices). He has conducted application audits for problem resolution and business improvement including re-engineering of business practices. Dave has worked on a fellowship to the USAF in the areas of repair & maintenance and the improvement of manufacturing systems used by suppliers of aircraft components. He has been a speaker for APICS in the areas of Material Planning and Bar Coding. In addition he has spoken and chaired panels on production systems, repair & service systems and Surge/Mobilization planning for the USAF. His industry experience includes; discrete manufacturing, process manufacturing, petroleum refining, electronics manufacturing, construction, aerospace, and aircraft manufacturing. He can be reached at dtipping@solutionbeacon.com.

Art Dowd, Solution Beacon

The Solution Beacon Foundation Update

The Solution Beacon Foundation is a charitable organization established to "Feed Children's Minds and Bodies.[sm]" by delivering aid and assistance to others less fortunate.

Too often we get caught up in the normal day-to-day items and issues that are part of a life. We tend to lose sight of the fact that we have been blessed to be where we are today in many different ways. We all have had personal tragedies to deal with but can always count on our friends and families to help us get through ... but what about others not so lucky?

The Solution Beacon Foundation was created to leave a legacy behind for all of us. We've all contributed in different ways to a variety of charitable causes but this Foundation is something that can (and will) personally touch all of us at Solution Beacon. We want the Solution Beacon Foundation and its impact to be felt far beyond what we can individually accomplish.

Many of us have been part of organizations that left no lasting impact or impression. The Solution Beacon Foundation's impact will be felt, appreciated AND MAKE A DIFFERENCE long after we are all gone. This is our goal and our mission. Please check the following url for updates on the latest successes:

www.solutionbeaconfoundation.org

The Management Team, Solution Beacon, LLC

Upcoming Solution Beacon Events

EVENT	DATE	LOCATION
AZ-OAUG – Workflow Training Seminar, Karen Brownfield	May 20, 2004	Scottsdale, AZ
SCOUG / SCOAUG Training Days – *Forms Development Standards*, Susan Behn	May 20-21, 2004	Houston, TX

SCOUG / SCOAUG Training Days – *If RAID then RAC*, Kevin Dahl	May 20-21, 2004	Houston, TX
SCOUG / SCOAUG Training Days – *Linux*, Will Cordle	May 20-21, 2004	Houston, TX
SCOUG / SCOAUG Training Days – *Post Upgrade Support in the Release 11i World*, Will Cordle	May 20-21, 2004	Houston, TX
OAUG eLearning – *RAC*, Kevin Dahl	May 25, 2004	Webcast: 12-2 PM and 7-9 PM
Oracle Applications Technology Symposium (OATS) – *FSGs Made Simple*, Ronda Ellis and Karen Brownfield	May 25-26, 2004	Cincinnati, OH
Oracle Applications Technology Symposium (OATS) – *30 Minute Release 11i Security – Keeping The Bad Guys Away*, Randy Giefer	May 25-26, 2004	Cincinnati, OH
Oracle Applications Technology Symposium (OATS) – The Road to Orlando[sm] – *Release 11i Workshops*	May 25-26, 2004	Cincinnati, OH
OOAUG	June 3, 2004	Oklahoma City, OK
Solution Beacon and OAUG – The Road to Orlando[sm] – Executive Breakfast and *Release 11i Workshops*	June 4, 2004	Phoenix, AZ
Solution Beacon and OAUG – The Road to Orlando[sm] – Executive Breakfast and *Release 11i Workshops*	June 11, 2004	Los Angeles, CA
DOUG – *Post Upgrade Support in the Release 11i World*, John Stouffer	June 17, 2004	Dallas, TX
Solution Beacon and OAUG – The Road to Orlando[sm] – Executive Breakfast and *Release 11i Workshops*	June 24, 2004	Denver, CO
Solution Beacon and OAUG – The Road to Orlando[sm] – Executive Breakfast and *Release 11i Workshops*	July 16, 2004	Washington D.C.
Solution Beacon and OAUG – The Road to Orlando[sm] – Executive Breakfast and *Release 11i Workshops*	July 23, 2004	Atlanta, GA
Solution Beacon and OAUG – The Road to Orlando[sm] – Executive Breakfast and *Release 11i Workshops*	July 27, 2004	Portland, OR
NCOAUG	August 13, 2004	Chicago, IL
OAUG Connection Point 2004	September 12-15, 2004	Orlando, FL
Oracle OpenWorld	December 5-10, 2004	San Francisco, CA