

Lessons From the Front: Upgrading to Release 12.1

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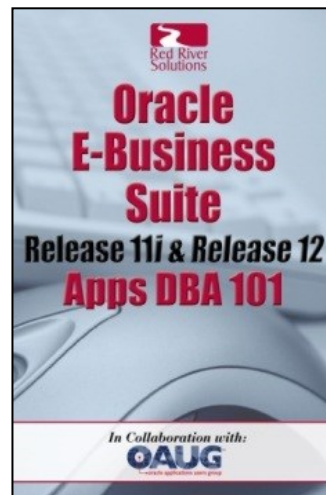
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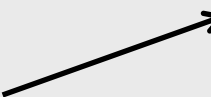


Barbara Matthews

- OAUG Upgrade SIG Board
- OAUG Connection Point Seminars Board
- Oracle Databases Version 7+
- Oracle Applications Release 10+
- Oracle Ace
- Specializing in E-Business Suite Release 12 Upgrade Readiness Assessments/Health Checks, Upgrades, and General Nitpicking



I suffer from delusions...
I think I'm Nancy Drew



Presentation Objectives



- Describe lessons learned from upgrading to Release 12.1.3 over and over and over
- This presentation is based on *The Big Picture – Upgrading to Release 12.1* by Mike Swing, TruTek and Barbara Matthews, published in the Winter 2011 Insight Magazine.



Assess Your Situation

An Assessment/Health Check should document your current state:

- Your architecture
- Software Versions: the OS, the DB, the Applications
- Status of Mandatory Release 11i Extended Support
Baseline Patching
- Upgrades you must do before upgrading to R12
- Issues that must be resolved before upgrading or after
- TUMS steps you do not need to do
- Technology Stack Validation Utility results
- patchsets.sh results, Patch Wizard results
- And anything else you can think of

High Level Upgrade Steps

- Assessment/Health Check – Determine Your Overall Readiness and Plan
- Patch/Upgrade R11i Where Necessary – Multi-Org, OATM, Release 11i Mandatory Extended Support Patches, ATG RUP7, AD.I.7, HR, RDBMS 11.2.0.3
- First Pass/Prototype – Upgrade to R12.1.3 to See What Issues You Have – This is a Technical Upgrade
- Determine Customizations Impact and Functional Impact
- Do More Upgrade Passes, Apply More Patches, Customize and Document, Refine Your Process
- Test and Rollout



There's So Much to Do



Migrate
to
OATM

Build
Your
Initial
Test
Plans

R11i
Minimum
Baseline
Patching

Upgrade
The
Database

Upgrade
JRE to
JRE
1.6.0_XX+
or
1.7.0_XX+

Add to
Your
Initial
Test
Plans

Identify Your
Customizations,
Learn New
Development
Tools

Convert
to Multi-
Org

Migrate to
64 bit OS

Implement
New
Hardware

Upgrade the Applications, Patch the
10.1.3 and 10.1.2 Applications Server
Code, Upgrade to JDK 1.6.0_10, Patch
Modules Current, Apply the Latest
CPU/PSU

Plan & Test
Upgrade by
Request

Post-Upgrade Testing:
Generic Data Fixes (GDFs)

You Can Break Your Upgrade into Smaller Projects



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There's So Much to Do



You Can Break Your Upgrade into Smaller Projects

What about implementing new modules?

What about additional projects?

1. Control change – upgrade the existing environment first
– the amount of change for R12.1.3 is HUGE
2. Add new modules after, as a separate project
3. Add additional projects after, as a separate project



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It Takes Longer If You Haven't Stayed Current

An example of an 11.5.7 Upgrade:

- Upgraded the RDBMS from Version 9i to 10gR2 to 11gR2
- Migrated to Oracle Applications Tablespace Model (OATM)
- Upgraded the E-Business Suite from 11.5.7 to 11.5.10.2 to R12.1.3+

Six days, around the clock

Use the Biggest, Fastest Computers Possible...

- With as much CPU and memory as possible
- Running the fastest disk I/O
- Using Raid 1+0 rather than Raid 5
- With SAN tools available so you can do fast backups and restores
- Consult with your hardware vendor to determine how to best use their solution



Use Those Powerful Computers During the Upgrade

Some clients test on older non-production hardware and then switch to new hardware for the production go-live

“Using Grandma’s old PC, found in the back of the closet”

- Speed up your upgrade by using the production hardware – iterations will go so much faster
- Reduce the possibility of experiencing technical difficulties with the hardware or operating system by using the hardware and operating system that will be used for production
- Only set up the hardware and operating system once
- Give your technical staff a break – the faster the hardware, the faster they can provide new instances for testing

Automate Anything That You Can



- Automate the upgrade process to eliminate manual steps
- Use Oracle tools like FNDLOAD or iSetup (requires a lot of patches) to migrate your setups
- Consider third-party tools to assist with testing and tracking customizations
- If you are using multi-language, see MOS Doc. ID: 252422.1, *Requesting Translation Synchronization Patches* – do the upgrade and apply all of the US patches like you normally would, then run the script, upload the manifest to MOS, wait several hours (8-12), and download one patch per language. Once applied, you're "caught up".
- Merge patches – but avoid last minute changes to your merge patch



Clean Up Your Release 11i Database



- Don't move — and process — data that you don't need
- Archive any data that can be archived
- Review Oracle's seeded Purge programs to see if there are any that you could be using to decrease the size of your database
- Rebuild tables/indices after big purges

SEE BARBARA MATTHEWS' *CLEAN UP THAT MESS! A MOTHER'S GUIDE TO MANAGING YOUR E-BUSINESS SUITE CLUTTER*



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Purge It If You Can

- FND_CONCURRENT_REQUESTS – Purge Concurrent Requests and/or Manager Data – consider creating a history table
- Purge Obsolete Generic File Manager Data (FND_LOBS)
- FND_LOG_MESSAGES – Purge Debug Log and System Alerts
- PERFSTAT
- FND_LOGINS – Purge Signon Audit data
- Diagnostics – Delete Diagnostics Logs and Delete Diagnostic Statistics
- WSH_EXCEPTIONS
- Purge Inactive Sessions
- Purge Obsolete Workflow Runtime Data + Workflow Analyzer (see MOS Doc. ID: 1452224.1, Workflow Analyzer Tool FAQ)
- FND_ENV_CONTEXT
- Purge RX Interface Data and Purge RXI Interface Data
- Purge Page Access Tracking Repository
- PO_WF_DEBUG

SEE BARBARA MATTHEWS' *CLEAN UP THAT MESS! A MOTHER'S GUIDE TO MANAGING YOUR E-BUSINESS SUITE CLUTTER*



Don't Forget About OATM

Sooner or later, you need to get your tablespaces migrated to the Oracle Applications Tablespace Model (OATM)

- Most companies migrate in advance on Release 11i
- You may want to reorg your data again, even if you already migrated to OATM – consider Oracle Managed Files (OMF)



If You're Not Already Migrated to OATM



- OATM:
 - Uses fewer and more consolidated tablespaces
 - Uses Locally Managed Tablespaces
 - Accounts for the I/O characteristics of an object
 - Reclaims space after migration
 - Provides Real Application Cluster (RAC) support
- Before, during, or after, you need to migrate to the Oracle Applications Tablespace Model (OATM) if you haven't already



If You're Not Already Migrated to OATM

- See MOS Doc ID: 404954.1, *How to run OATM migration utility*
- Patch 3381489 requires 11i.AD.H minipack and a minimum database version of Version 9.2.0.4
- Search My Oracle Support for notes on issues with OATM



Migrate to OATM



Advantages of Migrating Before:

- It's a big job, do it separately from the rest to keep the migration out of the R12 downtime window
- Migrate before to reorganize your fragmented data
- Migrating during the upgrade is one more thing that could go wrong
- If you do it after, it's more work after a long, complex upgrade
- It doesn't require a lot of testing to confirm that it worked



Convert to Multi-Org

- Must be done before R12 upgrade
- See MOS Doc. ID: 165042.1, *FAQ – Multiple Organizations Architecture (Multi-org)*
- See the *Multiple Organizations in Oracle Applications User Guide*
- Define at least one Operating Unit and set the profile option “MO: Operating Unit” at Site level to that value
- Run Convert to Multi-Org from adadmin
- Apply Patch 2451368: *Migrate data from Customers to Site Uses*



Upgrade to RDBMS 11.2.0.3 in Advance If You Can

- You don't have to, but...
 - Upgrading in advance shortens your downtime window.
 - Using the latest software from Oracle during your upgrade to R12 may also shorten your downtime window. The CBO improves with every release.
 - Not having to do any more database upgrades for a while after the upgrade to R12.1.3+? **Priceless**
- The tradeoff, though, is that you'll have to test the RDBMS 11.2.0.3 upgrade
- Of course, that lets you test how good you are at testing

SEE *IT'S TIME TO UPGRADE TO ORACLE DATABASE VERSION 11GR2!*, OAUG INSIGHT MAGAZINE, SEPTEMBER 2010



Yes, You Still Have to Test

- Things you might not expect to be a problem may be a problem:
 - Potential Gather Schema Statistics issues after upgrading to 11gR2
 - ORA-00001: unique constraint (APPLSYS.FND_STATS_HIST_UT) violated
 - ORA-20005: object statistics are locked
 - ORA-20001: invalid column name or duplicate columns
 - You may be able to avoid these issues if you follow the Interoperability document carefully when you upgrade to 11gR2
 - Corrupt data ORA-01578: Oracle data block corrupted (using redo logs to clone nologging tables)
 - ORA-00960: tablespace ‘_%deleted%1040’ does not exist (after alter table move, alter index rebuild, alter tablespace rename)
 - Database Links between 11gR2 and 8.1.7.4 do not work



Build Your Test Plan

- Build a test plan
- Use it and refine it for pre-R12.1.3 work
- Then keep on refining it, because you'll need it for the R12.1.3 upgrade
- Play your cards right, and you can reuse and refine that test plan for future upgrades as well – use it for Release 11i Extended Support Minimum Baseline Patching, for the database upgrade, CPU/PSU patching, for the R12.1.3 upgrade, and to test future patches, family packs, database upgrades, Release 12.2, Fusion and beyond.



What are the Release 11i/Release 12.0 Extended Support Minimum Baseline Patches?

- Oracle says you need to meet a minimum baseline of patches for Extended Support and for Sev 1 R11i Extended Sustaining Support
- They won't turn you down if you stump them with a problem
- But they may tell you that you need to apply a Family Pack
- That's only a problem if you're in the middle of a crisis and need a quick solution, and instead have to apply and test a large collection of patches
- It's all about risk. Your company needs to decide if they should apply the patches or not. You should not be the one to decide unless you can live with the potential consequences.
- It's a very hard decision to make because there are a large number of patches that would need to be tested. What if they break something?



Apply the Release 11i Mandatory Extended Support Minimum Baseline Patches in Advance

- MOS Doc. ID: 883202.1, patchsets.sh and Patch Wizard
- If there's a higher patch than the minimum, *usually* apply the higher patch
- Aside from the advantages of being supported by Oracle, using the latest patches streamlines the R12 upgrade
- Search *hard* for rollups – on MOS, with patchsets.sh, with Patch Wizard
- Test one-off patches carefully
- There is nothing quite like figuring out that you have to apply a boatload of one-off patches while you're trying to get through the R12.1.1 maintenance pack
- Consider upgrading the RDBMS to 11.2.0.3 at the same time as this, to cut down on testing cycles



Can You Upgrade to R12.1 Without the Mandatory Extended Support Minimum Baseline Patches?

- Yes.
- But you'll find you have to apply a subset of those patches to get through the R12.1 upgrade.
- So, you start the 12.1.1 patch, it'll error, you'll find some patches to fix the problem, start it up again, it'll error, apply some more patches...
- While you won't apply as many patches as you will for the Baseline, the quantity and amount of research that you have to do will be substantial



Don't Underestimate How Big a Job the Release 11i Mandatory Extended Support Minimum Baseline Patches Are

- It may take months
- You have to test everything, just like you will for the Release 12 upgrade
- Customizations can break, interfaces may change, Oracle-seeded code will change (a lot)



What About Release 12.0 Extended Support Minimum Baseline Patches?



For those of you who are already on R12.0, but not on 12.1.3:

- You didn't think you were going to get off the hook, did you?
- As of February 2012, you were supposed to upgrade to R12.1.3.
- If you upgrade to R12.1.3+, be sure to run Patch Wizard to find out about additional patches and family packs.
- Patch current! R12.1.3+ needs additional patches.



Start with a Smooth First Pass Upgrade/Prototype to R12.1.3+

Avoid the bucking bronco:

- Upgrade to Multi-Org
- Apply ATG RUP7 and AD.I.7
- HR changes a lot in R12 and requires a lot of one-off patches if you aren't current to get through the R12.1.1 maintenance pack
- Look for more patches for ATG RUP7, AD.I.7, the RDBMS (more on that later...)



Understand and Test Upgrade By Request

- Upgrade certain CRM, Financials, Procurement, Projects and Supply Chain Management data during the R12.1.3 upgrade
- Process the rest, or a subset of the rest after the R12.1.3 upgrade is complete; or process all the data as part of the upgrade; or don't process any additional data other than the mandatory default; or process a particular subset much later
- The default is data *for the current fiscal year and the periods of the previous fiscal year that are necessary to ensure there are at least six periods in the upgrade*
- Technical staff need to understand what the functional staff need, from the very beginning

Understand and Test Upgrade By Request

As part of your upgrade planning, be sure that your functional users understand Oracle's default processing — they may want to process *more* than just the default during the upgrade downtime

- Read MOS Doc. ID: 980112.1, *New Functionality for SLA Upgrade Process for R12.1.2*
- Read MOS Doc. ID: 604893.1, *R12.0 and R12.1: FAQ for the SLA Upgrade: SLA Pre-Upgrade, Post-Upgrade, and Hot Patch*
- Read MOS Doc. ID: 399362.1, *Oracle Applications Release 12 Upgrade Sizing and Best Practices to evaluate the potential growth of your SLA tables*
- Read Oracle's *Oracle Applications Upgrade Guide: Release 11i to Release 12.1.1, Part No. E16342-04*



Understand and Test Upgrade By Request

Option 1 – Accept the Default: The Minimum Downtime Upgrade

Apply Patch 5233248 on R11i + submit the SLA Pre-Upgrade Concurrent Program before applying 12.1.1. This will upgrade approximately 6 periods. After, apply either Hot Patch 5584908 + run the SLA Post-Upgrade Concurrent Program, or run SLA: Upgrade Historical Subledger Transaction Accounting Program (XLAONDEUPG), or do nothing (probably not what your functional users want).

Note: Hot Patch 5584908 is a driver file (\$XLA_TOP/patch/115/driver/xla5584908.drv) delivered with base R12.0.0, so don't try to find it on MOS as a separate patch, just run the driver file

See Mike Swing's [Three XLA invalid objects if you don't apply the SLA patch 5233248 to 11i before the R12.1.3 upgrade](#)



Understand and Test Upgrade By Request

Option 2 – Process More Than The Default During the Upgrade

Apply Patch 5233248 so you can change the default number of periods of historic data to be upgraded **and 10231107** if you use Oracle Projects and/or Grants Accounting to R11i before applying 12.1.1, submit the SLA Pre-Upgrade Concurrent Program to select what data to upgrade, then apply 12.1.1. After, either apply Hot Patch 5584908.drv and then run the SLA Post-Upgrade Concurrent Program, or run SLA: Upgrade Historical Subledger Transaction Accounting Program (XLAONDEUPG).

Note: Hot Patch 5584908 is a driver file (\$XLA_TOP/patch/115/driver/xla5584908.drv) delivered with base R12.0.0, so don't try to find it on MOS as a separate patch, just run the driver file

Understand and Test Upgrade By Request

Option 3 – Process All of the Data

Apply Patches 5233248 +/- 10231107 + SLA Pre-Upgrade Concurrent Program for all data as part of the downtime window

NOTE: You can either apply Hot Patch 5584908.dr or run XLAONDEUPG, but you can't do both. If you start using XLAONDEUPG, then it will need to be continued to be run for each product, ledger and period.

NOTE: Most companies should consider Option 3

NOTE: All AP accounting transactions are copied into the SLA repository no matter what you put for the periods

Understand and Test Upgrade By Request

Hot Patch 5584908 or XLAONDEUPG: What's the Diff?

From MOS Doc. ID: 1376752.1, *SLA: Upgrade Historical Subledger Transaction Accounting Program (XLAONDEUPG)*:

- The Subledger (SLA) post upgrade on demand concurrent program called Upgrade Historical Subledger Transaction Accounting (XLAONDEUPG) allows you to upgrade transactions for a particular Subledger (e.g., AP, AR, FA, Costing), GL ledger, and accounting period.
- Whereas, the SLA Hot Patch (xla5584908.drv) only allows you to specify a period, and all historical transactions for the Subledgers are upgraded at the same time during this post upgrade step.

Understand and Test Upgrade By Request

XLAONDEUPG

- Use XLAONDEUPG if you have a ledger in existence and want to create a secondary ledger with links to appropriate data
- Use XLAONDEUPG if you need to add an additional reporting currency or a secondary ledger
- Companies with many years of historical data may choose to upgrade a subset – 7 years, for example. The rest of the data is still there, it just hasn't been processed.
- Upgrade as much data as you think you'll need (ever!)
- If you can take it all, do so
- *Remember - it's one or the other – XLAONDEUPG or Hot Patch 5584908. Most likely, you'll use Hot Patch 5584908*



Understand and Test Upgrade By Request From a Geek's Perspective

First Pass Upgrade / Prototype

- The first time your technical staff tries upgrading to R12.1.3. The purpose is to get through without having to stop and start while dealing with a lot of failures with the 12.1.1 maintenance pack. The purpose is not (generally) to provide a perfect test environment for the functional staff. So (generally) accept the default for Upgrade by Request.

Second Pass Upgrade

- Start testing to see how long it takes to process all the data that functional users want processed. Can you do all of it during your downtime window, or do you need to split off part of it and process it later?



When You ASSume...

Just because the First Pass Upgrade went smoothly doesn't mean the rest of the upgrade will

- Your pesky test team is going to find all kinds of problems for you to fix, which may break other things
- You still have to figure out customizations, but you don't have to do that for the First Pass



How To Organize For The Upgrade

Get Yourself a Big Binder

1. OK, you can use a folder on your computer.
2. The point is, you need to save the material that led you to do what you decided to do, because someday, someone will want to know *why* you did that, and if you go back to the *current* version of a MOS document, it may not reflect the instructions you so faithfully followed.
3. Why is this important? Because sometimes being able to prove that you did what you were supposed to do is your only consolation in an argument about why you did what you did when you did what you did.
4. Korean Lexers on Release 10gR2 provides a perfect example



Build a Spreadsheet



1. Save the My Oracle Support Notes that you use
2. Track all the steps
3. Cross off items from the Upgrade Guide that Tums says you don't have to do
4. Build a spreadsheet



Look for “Known Issues” MOS Notes



- Oracle releases a substantial patch like RUP7
- Users apply the patch and find issues over time
- Oracle creates a “Known Issues with Patch XYZ” for many of the big patches (but not all)
- The Known Issues MOS Document may include additional patches or statuses of bugs related to the original patch
- Even if you’ve already upgraded to RUP7, track the Known Issues document, because those patches may affect the R12 upgrade and there may be more patches since you upgraded

Did I Tell You About CUP1 Patches?



- My ABSOLUTE FAVORITE!
- When you install Release 12.1.1, it's the original Release 12.1.1
- Oracle has found many solutions to problems since then
- Merge the 199+ (as of 02/19/2013) Oracle E-Business Suite Pre-install Patches with the R12.1 EBS Consolidated Upgrade Patch 1 (CUP1) Patch 7303029 after installing Release 12.1.1 and before running the upgrade – they're "pre-install patches" – they copy new code in place of earlier code, and then R12.1.1 runs the newer code
- See MOS Doc. ID: 1448102.1, *Oracle E-Business Suite Pre-install Patches Report*
- These patches are "no fuss" patches – no pre-reqs ❤️
- MOS Doc. ID: 1448102.1 may be updated monthly if there are new patches or superseded patches
- Oracle says apply all "Upgrade script failure--EBS" and "Performance issue--EBS" patches, have functional analysts review "Data corruption--EBS" and "Upgrade integrity fix--EBS" patches



Troll MOS for More Issues



- Search on “12.1 fails”, “12.1 Known Issues”, “CUP1 Supplemental”, “6678700 fails”, “R12.1 Performance”



Do Lots of Interval Backups

It's OK to throw away your upgrade attempt and restart

If you've missed a preinstall patch and can't work around it

If you've missed a step – like running the wrong version of adgrants.sql at the wrong time with the wrong username

Don't be so wedded to getting through the Upgrade Pass that you can't let go and start over

BUT

Don't assume you have to throw away your work every time you hit a hitch

Search for a Solution: MOS, Google, My Oracle Support Community

Look at These MOS Documents... and Then Look Again... and Again...

- Oracle's *Oracle Applications Upgrade Guide: Release 11i to Release 12.1.1, Part No. E16342-04*
- 881505.1, *Interoperability Notes Oracle EBS 11i with Oracle Database 11gR2 (11.2.0)* - Note: there's a different interoperability note for each potential combination – R11i with 11.2.0.1, R11i with 11.2.0.2... 881505.1 is the Master Note for **11.2.0.3**
- 1058763.1, *Interoperability Notes Oracle E-Business Suite Release 12.0 or 12.1 with Oracle Database 11g Release 2 (11.2.0)* – Note: there's a different interoperability note for each potential combination – R12 with 11.2.0.1, R12 with 11.2.0.2... 1058763.1 is the Master Note for **11.2.0.3**
- 1080973.1, *Oracle E-Business Suite Release 12.1.3 Readme*
- MOS Doc. ID: 1448102.1, *Oracle E-Business Suite Pre-install Patches Report (CUP1)*
- MOS Doc. ID: 954704.1, *EBS: R12.1 Oracle Financials Recommended Patch Collection (RPC)*



Identify and Log Your Customizations

- Interfaces, Concurrent Programs, Menus, Reports, Responsibilities, Request Sets, Request Groups, Forms, Functions, Personalizations, Printer Definitions, Flexfields, Value Sets, Profile Options, Custom Oracle Alerts and modifications to seeded Workflows
- Dealing with customizations may be the biggest task you do

SEE DONNA CAMPBELL'S *WHAT YOU NEED TO KNOW ABOUT IDENTIFYING CUSTOMIZATIONS BEFORE UPGRADING*



Clean Up Your Customizations



- Maintaining customizations costs money
- Eliminate customizations if you can
- Now's your chance to clean up and organize and follow standards to make future upgrades easier
- It is possible that Oracle will have come up with a way to do what your customization did



Determine Customizations Impact

- Decide if you should fix broken customizations on the R12 side
- Learn how to use new development tools if needed
- Review Oracle naming conventions for customizations
- Determine how to maintain the customizations
- Customize and test... and DOCUMENT



Use Patch Wizard ❤️ After You've Upgraded to R12.1.3

- Patch it first
- Then run it and it will tell you additional important patches that you should consider applying
- If you applied any patches in pre-install mode (you did), it will list those as well - you can tell it to stop telling you about patches that you know you've already applied (there's a backport request for Bug 14750440 ADPATCH NOT UPLOADING PATCH HISTORY FILES)
- Test and apply the new patches
- Don't be surprised if you find patches that Patch Wizard doesn't. Patch Wizard doesn't tell you about every released patch; it tells you about patches that Oracle's development groups conclude are critical

SEE ORACLE E-BUSINESS SUITE RELEASE 11I & RELEASE 12 PATCHING 101 – FREE DOWNLOADABLE BOOK



Patch Wizard

There are two main ways to find patches:

1. Patch Wizard
 - Will only tell you about highly recommended patches
2. Scouring MOS
 - If you want the absolute, most current patches, this is how you find them
 - If it is not highly recommended, should you apply it?

SEE *EBS – PATCHING OVERVIEW & TROUBLESHOOTING EMEA & US*. SEE MOS DOC. ID: 1455806.1, *EBS APPS TECHNOLOGY GROUP (ATG) ADVISOR WEBCAST ARCHIVES*



Analyze Patch Impact with Patch Wizard

- Download patches you are considering applying and the latest infobundle.zip to your patch directory
- Analyze the impact ❤️
- Now you can tell what files have changed, which can help you decide what to test
 - If you know a form has changed, test the form
 - If you know a concurrent program has changed, test the concurrent program

Log Enhancement Requests



- Log Enhancement Requests and SRs
 - Log Service Requests (SR) for Patch Wizard issues under the Product **Oracle Applications Manager** and the Problem Category **Application Manager (OAM) Issues** in My Oracle Support. Note – you will need to click on Search all software products to see Oracle Applications Manager.
 - On the *Create an SR's* ☐ *General Information* screen, enter "☐Product Enhancement Request" in the Problem Summary field as the abstract. Enter a detailed summary of the feature in the Problem Description Field.



Create Patch Wizard Reports

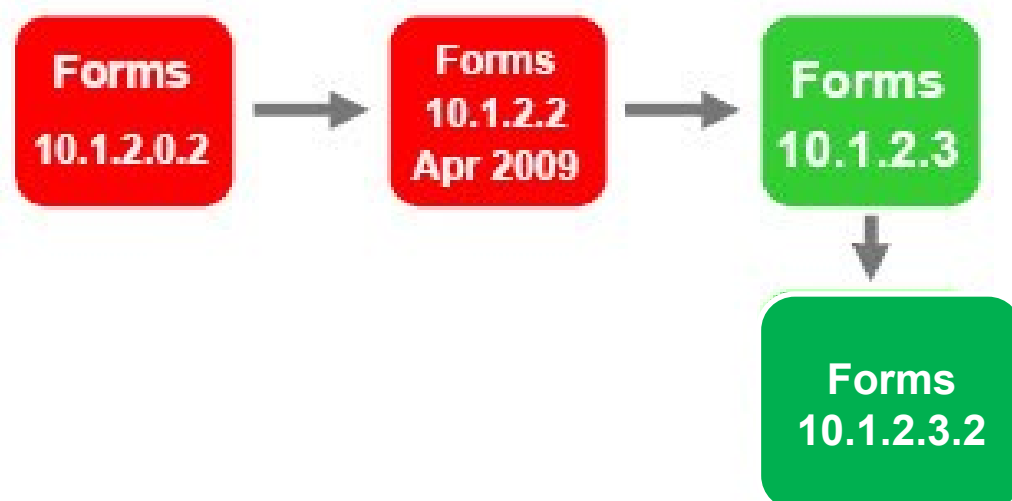


- Write your own reports – Patch Wizard saves its information in tables! ad_pa_analysis_runs, ad_pa_analysis_run_bugs, fnd_imp_monitor, fnd_imp_psmaster2, ad_pm_patches
- Share what you know – if you've got a script, blog about it, put it out on a forum, share!
- Consider Third Party Tools (\$\$\$\$)
- Consider Oracle Application Change Management Pack (\$\$\$\$)



Patch Patch Patch Patch Patch Patch

- Application Server Release 3 (10.1.3) Patchset 5 (10.1.3.5.0)



NEW! Oracle Forms & Reports 10g Bundle Patch 10.1.2.3.2 (Patch 14825718) is now available – Forms and Reports 10g 10.1.2.3.2 certified with EBS 12, Steven Chan's blog

See MOS Doc. ID: 437878.1, *Upgrading OracleAS 10g Forms and Reports in Oracle E-Business Suite Release 12*

E-Business Suite Technology Stack Certification Roadmap, Steven Chan, Senior Director, Applications Technology Integration – track this roadmap to know when new versions are certified, see also MOS Doc. ID: 380482.1, *Oracle E-Business Suite Release 12 Technology Stack Documentation Roadmap*

JRE 7 is Now Certified



- This affects both R11i and R12
- There are patches to make it work right
 - Apply Forms Patch 14615390 to EBS 11i environments (MOS Doc. ID: 125767.1)
 - Apply Forms Patch 14614795 to EBS 12.0 and 12.1 environments (MOS Doc. ID: 437878.1)
- Don't LAG – go to JRE 7

SEE *JAVA JRE 1.7.0_13 CERTIFIED WITH ORACLE E-BUSINESS SUITE* ON STEVEN CHAN'S BLOG <https://blogs.oracle.com/stevenChan>

All Done?



Nope



One more acronym:

- GDFs
- Generic Data Fixes
- First, See MOS Doc. ID: 874903.1, *What is a Generic Datafix Patch (GDF) and what GDFs are available for Payables? [VIDEO]*



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Generic Data Fixes

- GDFs are patches created by Oracle Development to fix data issues caused by Bugs/Issues in the Application Code
- If you think you have a problem identified by a GDF:
 - You run a select script to see if you have the problem
 - You run an update script to fix the problem if you have the problem
 - The fix script backs up your old data
 - In most cases, a patch is provided that you can use for future upgrade runs
- As of 02/23/13, there were **171 potential patches**



How to Approach Generic Data Fixes



- Treat them like the Validation Steps at the end of the upgrade guide
- Review the list – it may help you find additional issues to test
- Pre-install GDFs (currently 3) are part of the E-Business Suite Pre-install Patches that are merged with CUP1
- For post-upgrade GDFs, if you encounter the problem, fix it, make sure it worked, and add that to the list of patches to be applied next time
- There are too many fixes to easily track down each MOS Document and proactively try these out. If you use the module, and you have a problem, review the GDF list to see if you can find a match, then follow the instructions
- Functional testers and DBAs will need to work together to ensure that the patches are added to the plan, run and tested
- The wording in the MOS Notes does not lend itself to blindly applying GDF patches to prevent issues. Make sure you have the issue, then fix it.



Good News! There's a GDF Diagnostic ❤️

- Check MOS Doc. ID: 1360390.1, *R12: Master GDF Diagnostic to Validate Data Related to Invoices, Payments, Accounting and Suppliers [VIDEO]*
- This is what Oracle says: This script will check the transactions you specify for any data issues for which Generic Data Fix (GDF) patches are available. It can also scan for additional known issues for which a GDF patch is not yet available (Non-GDF). It will not fix the data but simply report on what corruption exists and point you to the notes and/or patches that will allow you to fix the data.
- Use the diagnostic first, and resolve any other issues on a case by case basis by searching for problems you find in MOS Doc. ID: 874903.1

One More Thing About GDFs



From MOS Doc. ID: 1360390.1, *R12: Master GDF Diagnostic to Validate Data Related to Invoices, Payments, Accounting and Suppliers [VIDEO]*:

IMPORTANT: In conjunction with the diagnostic described in this note, R12.1 customers should review the notes indicated below which describe the Recommended Patch Collections (RPC) for related products. **The vast majority of the data integrity issues detected by this diagnostic could be proactively avoided by applying the RPCs for these products.**

Doc ID 1397581.1: R12.1: Payables Recommended Patch Collection (AP RPC)

Doc ID 1481235.1: R12.1: E-Business Tax Recommended Patch Collection (ZX RPC)

Doc ID 1481221.1: R12.1: Payments Recommended Patch Collection (IBY RPC)

Doc ID 1481222.1: R12.1: Sub Ledger Accounting (SLA) Recommended Patch Collection (XLA RPC)

See MOS Doc. ID: 954704.1, EBS: R12.1 Oracle Financials Recommended Patch Collection (RPC)

More Advice



Test Test Test Test Test Test Test

- By the time you're ready to go into production, you need to have a repeatable test plan that your test team has documented that can be used over and over (was that redundant?)
 - ... because Oracle isn't going to stop creating patches
 - ... because Release 12.2 is just around the corner
 - ... because Fusion isn't just a dream
- The Oracle E-Business Suite of Applications will continue to change – a lot
- You need to be able to test in the future without reinventing the wheel each time



Testing Best Practices

- Log all issues and assign them to someone to fix
- Include responsibility used, menu path followed, print screens of errors, and form or report name with log, concurrent request id showing problem
- Do not purge concurrent requests on test systems
- Don't close the issue until the person most affected by it agrees it is fixed
- Include performance before and after results with the issues log – “It looks faster to me” is not sufficient
- Technical staff should “pre-test” solutions where possible
- Include SR, MOS notes references, Patch Number applied, Patch Wizard analysis, and recommended areas to test solutions in issues log



Keep Patching Until You Finish User Acceptance Testing (UAT)

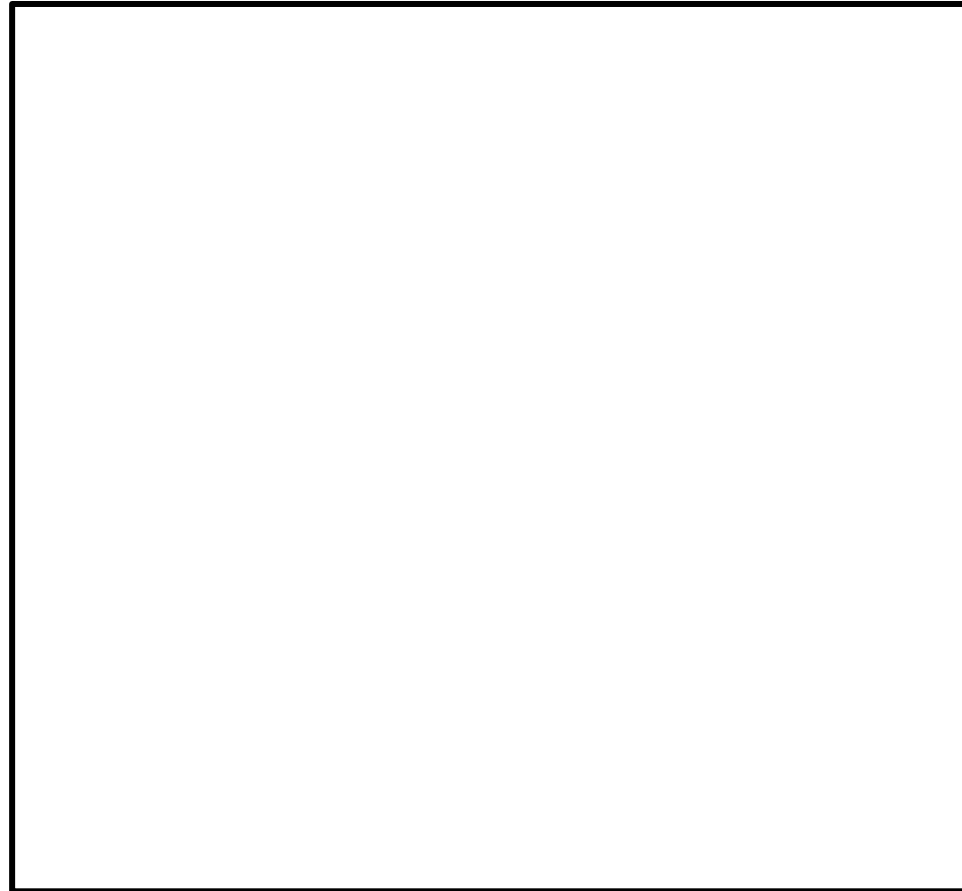


- During UAT, assess whether to apply patches if they will change a large amount of code
- And then draw the line, because there will *always* be another patch that you *could* apply
- Only apply patches that fix something that is broken and absolutely must be fixed before going into production

What's the Rate of Change for R12.1.3?

- Please note, I am neither a mathematics professor nor a statistician, but...
 - I ran Patch Wizard against the VIS instance in April, 2011 and there were 79 additional patches.
 - I ran Patch Wizard against the VIS instance in February, 2012, and there were 273 patches. I read more than 300 READMEs to get through the latest upgrade because patches have prerequisites and prerequisites have prerequisites and patches have post steps... Mileage will vary, but...
- Don't forget to run Patch Wizard to catch the extra patches and Family Packs recommended by Oracle.
- Be sure to stay current on the 11.2.0.3 Interoperability documents and the Known Issues document for ATG RUP7

When You're All Done, Here's What You Won't Have Patched



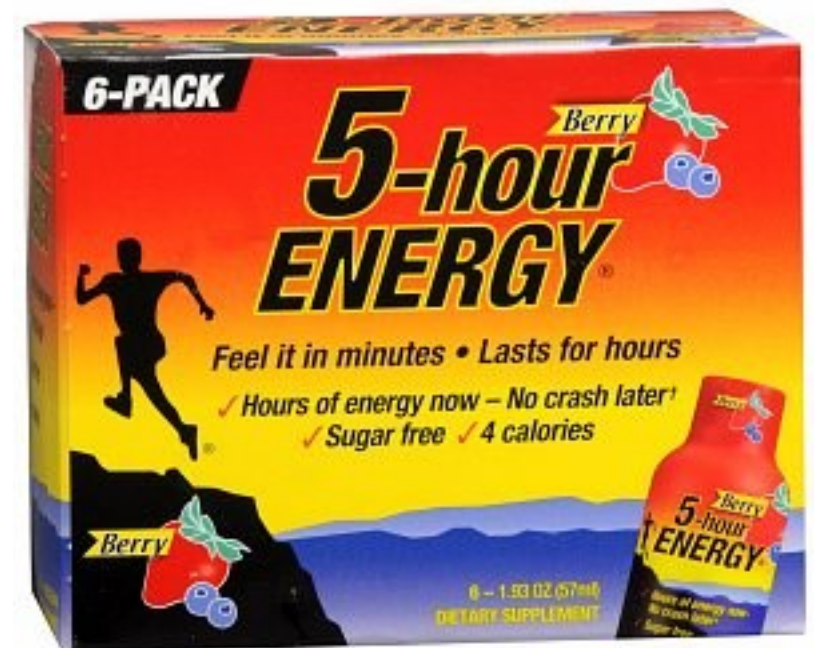
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Practice the Upgrade Repeatedly

And by *repeatedly*, I mean more than two times

- If you're not dreaming every night about the upgrade steps...
- If you're a DBA and you don't have a secret instance tucked away somewhere that you upgrade just to test out a theory...
- If you're a DBA and you haven't figured out how to expense a case of Five Hour Energy Drinks...
- If you're a manager and you believe the DBAs, developers, end users and consultants when they say they've made "very few customizations"...

... then you may not be ready to go-live



Conclusion



“Upgrading Makes Me *Sweat*”
(Barbara Matthews)

“Upgrading Makes You *Perspire*”
(Barbara Matthews’ mother)

Questions?



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