



White Paper

Red Light Yellow Light Green Light
Balancing Risk and Cost in your Business Application Testing

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ABOUT CONTRACTORS NETWORK

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ABOUT THE AUTHOR

Melanie Cameron, the Oracle E-Business Suite manager for MSS Technologies, has focused her career on business processes surrounding enterprise management systems. Having been promoted to Assistant Controller, she realized the security and repetitiveness of accounting was not what she wanted to do the rest of her career, and switched over to the Dark Side of Information Technology. Since then, she has focused in bringing the needs of accounting and the constraints of a prepackaged system together to provide business solutions that improve processes and accuracy of information of companies. In doing so, she has become fluent in both Accounting-ese and Technology-ese, often acting as an interpreter for the two disparate groups in the same organization.

Melanie has 15 years of experience on Oracle E-Business Suite, beginning on Release 9, and including Release 12, and is the author of R12 General Ledger and R12 Procure to Pay, coming out May '09 from Oracle Press, when not working on computer systems; Melanie spends her time knitting and learning Traditional Japanese Embroidery.

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TESTING

Testing..... A dirty word business application users run from whenever they hear it mumbled. The more extensive a business application is used by an organization, the more involved the testing is, and the faster they run! But in reality, this fear of testing starts to limit the application's functionality and security as patches are not applied or delayed due to the effort required. Until now, testing methods have been consistent for all computer applications – custom development, prepackaged software, as well as upgrades and patching for prepackaged programs. But this needs to change to balance the risk and cost of keeping up with technological advancements and the increases in the number of security patches in business applications.

A reality many organizations disregard is that patches and upgrades are tested for prepackaged programs prior to release by the vendor. Individual companies should take this into consideration when developing test plans by focusing on business critical functions and any processes that have been modified by the company outside of the prepackaged system features. By classifying these system functions into categories, testing can be reduced without large risk to an organization. And let's face it – risk is the reason we test!

Introducing Red Light, Yellow Light, Green Light testing. Classifying your business application system's functionality and processes into these three categories allows intelligent testing as opposed to blanket or blind testing. Red Light functions are the processes a company cannot live without. Functions should be classified using a global view of the company needing consideration, not an individual user's perspective of their workload within the company. A user may believe a function is critical, such as exporting data, to make their job easier and consider it Red Light. If that worker is able to perform their job duties with a reasonable work around, the function is most likely not a Red Light.

Classifying User Processes

Company wide Red Light functions are processes critical to performing daily operations, as well as staying in compliance with any governing agencies. An example of a Red Light function is cutting checks in Accounts Payables. Not many companies can go without paying their bills. These critical features will be tested with any and all patches and upgrades.

Yellow Light functions are features that are highly important to a specific business application user or to the company but will not be run for a period of time after the upgrade. These should be tested using one of two cases situations. Situation one is where time accommodates the testing. Situation two is a major upgrade that affected a majority of the systems functionality, where more thorough testing is mandated, as the risk of problems is greater. An example of the flexibility of Yellow Light testing is 1099 reporting. If the upgrade is completed in June, testing can wait until the 1099 changes for that year come out from your software company. However, if it is the beginning of March and you have not filed for the previous year yet, it should be tested prior to the production upgrade.

The Green Light category contains all the features that users like to use, but in reality can complete their jobs, or the company can function, without. It also includes repetitive testing for different transaction types that use the same functions or forms. For example – if you test creating an invoice in Accounts Receivable, and your system is setup to do 15 different types of invoice types, the probability is extremely high if one works, they will all work. Therefore it is only needed to test one type.

Making it work

To ensure this type of testing is successful, there are two critical mindsets that must be adapted in an organization. First, the saying 'A Successful Go Live is a non-event' will have to be removed from a project teams vocabulary. While this statement is always true, the support staff and system users must recognize that any issues found after go live for untested Yellow Light and Green Light items are not failures or issues with the Go Live. And second, support for the go live must include additional time post go live to ensure all the issues are resolved in a timely manner. It will be how these issues are resolved that will become the determining factor of the success of the upgrade or patch.

While this method of testing is not applicable for custom development where there was not a thorough in house testing prior to receiving the upgrades, it works for large packaged programs, such as Oracle E-Business Suite (EBS). Taking the time to research the patches and upgrades prior to applying them, looking for exact features affected, as well as any problems other companies are reporting, can help determine when Yellow Light features should be tested. This research usually takes much less time than the actual testing, and

since it is usually performed by IT and not Users, can be added to the time allotted for the project without having to beg time from another department.

EBS Specific Tools for Patch Research

EBS provides many tools that can assist with the patching research. First, getting a complete listing of patches applied is imperative. Using Oracle Application Manager is the easiest place to do this.

ORACLE Applications Manager

Applications Dashboard | Site Map

Applications System

Applied Patches :

Last Updated : 15-09-2008 14:09:32

Simple Search

At least one field must be completed.

Querying for a specific patch will return all patches that include the specified patch.

Patch ID

Applied From Date: 01-01-2007 To Date

Language

Go Reset

Patch Name	Merged Patches	APPL_TOP Name	Language	Completion Date	Details
4020093	None	auohsmesa02	US	06-04-2008 04:15:22	
4017028	None	auohsmesa02	US	06-04-2008 03:56:35	
6701339	None	auohsmesa02	US	23-02-2008 22:49:04	

System Administration > Patching and Utilities

This can provide a few valuable pieces of information. First, a complete list of all the patches applied in a given time frame, including the prerequisites. Second, under Details, a listing of all the bug fixes in this patch are available, and can also include a listing of the forms and reports that were affected. Usually, just knowing the patch number is enough to get you started.

Next step is looking up these patches on Metalink, Oracle's support web site. First look at the ReadMe for each patch itself (Metalink.oracle.com > Patches and Updates > Simple search). Readme's will often give a high level description of what the patch is intended to do, or it may refer to a Metalink Document with more information. From this, the patch can often be related back to the Red Light and Yellow Light test cases that would relate to it. For example, the one of the patches from above, 4017028 has a reference in the Read Me to a Metalink

document, and it states that this is a patch for Bill Presentment Architecture (BPA). This tells me that Printing Invoices in Receivables and updating invoice formats in BPA are the areas that should be considered for testing, depending on where these processes fall in the Red Light/Yellow Light/Green Light classifications. (Often, Printing Invoices is a Red Light classification and Updating invoice formats are a Yellow Light, depending on if there are any urgent changes required in the immediate future to the invoices, such as Remittance Address).

Then do a search on the specific patch number (4017028) and eyeball any specific issues reported with this patch. Using the same example, a note comes up that states there is a fix for printing PDF invoices for this patch. If you are using PDF invoices, specifically test for this problem to see if you need the additional patch. If you do not, then this issue can be ignored.

CONCLUSION

It is really important to understand that Oracle thoroughly tests every major patch that is released - on a predefined Vision instance with predefined setups, and that followed a predefined upgrade or patching patch. This means that 95% of the problems were caught prior to the patch ever being released. What you are testing for is the problems that are related to your specific and unique install and setup of EBS, focusing on the ones that will prevent the organization from functioning. The inconveniences can be fixed when they are found in production, if they even happen at all.

Utilizing this type of methodology for testing also requires a review both before and after each upgrade or patch. Prior to the patching, ensuring users are not utilizing new functionality that is not yet classified, or that a classification of a specific area has not changed due to business requirements or usage. After testing, reviewing a project for any problems resolved after the upgrade may change a processes classification, but ensure this is due again to business needs, and not individual user wants or complaints. It sounds like time is being added to a patching cycle, with pre and post reviews, and with the initial classifications, but the time savings are substantial. At one client, Accounts Payables took an average of 10 hours to test 100% of the functionality with an experienced tester. Testing Red Light functions over the past year takes about an hour, with an additional 2 hours for Yellow Light. After 8 cycles of patches, two minor problems were reported in this area. The savings in testing for just Accounts Payables alone was over 80 hours over the course of a year.

A lifelong believer in the If you want it to work, TEST It ALL camp, multiple upgrades and patches have proven this method efficient and cost effective, making me sing a new tune.