

View Point



New Age Approach to Test Oracle Siebel Applications

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Abstract

The traditional approach adopted by QA teams to test Oracle Siebel applications focuses on scenarios and components. Such an approach is plagued by several drawbacks and ideally speaking not suited for testing packages. However a business process based approach which focuses on reuse of existing business components, for both manual and automation testing, can alter the outcomes dramatically, especially in the case of Out-of-Box (OOB) business processes. The following paper highlights the drawbacks of the traditional approach of testing Siebel applications and discusses an alternative approach which when adopted by organizations helps reduce effort and cost of testing while improving time-to-market.

Traditionally QA teams adopt a scenario based approach while testing Oracle Siebel applications. Such an approach focuses on ensuring complete test coverage by covering the various possible scenarios. While such an approach works well in most cases of testing standalone applications, it is not so in the case of package applications. Further, delayed involvement of Subject Matter Experts (SMEs) and multi-vendor engagements, which provide clients obvious risk mitigation and cost benefits, typically results in scant disregard for processes. Consequently documentation suffers and the requirements captured are incomplete and inaccurate. Making matters worse, the dynamic business scenarios and increased customizations compel QA teams to complete exhaustive testing in a very short span of time. Given these constraints, its easy to see why QA teams favor the scenario based approach to test their package applications. However, the damage isn't restricted to this alone and it affects the impact analyses as well.

Lack of sufficient and up-to-date documentation on client specific Siebel customizations, results in faulty impact analysis at the time of maintenance or upgrade. Teams rely on requirement documents which capture business process and, flows to determine the critical components and paths which require testing. However, since these documents are updated infrequently, it becomes difficult to ensure adequate test coverage and this allows defects to creep in to the production environment.

Limitations of traditional approach to testing Oracle Siebel Applications

By adopting an approach, which focuses on scenarios rather than business processes we undermine the quality of testing. While the individual components and modules are tested thoroughly when we focus on scenarios, the interfaces are neglected and most often the defects detected are attributed to insufficient testing of the interfaces. Huge customer bases comprise of millions of records with complex relationships between various components within the system. The traditional scenario based approach to testing is unable to address the data sensitivity issues which arise during the migration process of these records and requires manual intervention, which is not advisable.

The delayed engagement/involvement of SMEs into the process also leads to poor understanding of the systems and processes. Since most Siebel implementations involve customization, not engaging SMEs early in the application development life cycle not only leads to incomplete and inaccurate capturing of business requirements, but also misinterpretation of requirements in some cases. Rectifying these mistakes later in the life cycle escalates costs and results in valuable time being lost, potentially ceding competitive advantage.

The relative lack of automation and reuse of existing business components is another major concern associated with the traditional form of testing. Low levels of automation and reuse forces testing to progress in a linear manner and the effort intensive testing needs to be repeated with every new release or upgrade of the Oracle Siebel application. In fact by progressing with testing in a linear fashion, teams need to wait for the newly developed application to stabilize before they may attempt to automate or test the performance of the system.

Another consequence of faulty impact analysis and a scenario based approach to testing Oracle Siebel applications is the relatively low rigor of regression tests. Not surprising considering that regression testing would follow the precedent set during the functional testing phase - focusing only on components and not the entire business process flow. Lack of reuse also leads to an inflation in time and cost required for setting up the regression suite. Neglecting or compromising on the quality of regression testing leads to defects creeping into production and increasing the cost of quality dramatically.

A comprehensive approach to testing Oracle Siebel Applications

It is possible to overcome the limitations of the traditional approach to testing Oracle Siebel applications by adopting a more comprehensive 3-pronged testing strategy/approach.



Since we are dealing with the testing of packages and not individual components it makes sense to adopt a business process oriented approach to testing. Such an approach helps eliminate the problems of low test coverage associated with the traditional scenario based approach. Since packages are based on business processes, it is fairly simple to analyze the requirements and understand the impact of new changes or customizations, if any, which need to be made to the system. Business process testing compels QA teams to test thoroughly the interfaces to ensure system integration is seamless. Given the nature of the Oracle Siebel applications there are a lot of upstream and downstream systems and it is necessary to ensure that modified functionalities don't impact them adversely.

In order to maintain the highest levels of quality despite budgetary and timeline constraints, modules and components can be subject to risk and priority based testing. This helps reduce effort and cost of testing, while maximizing test coverage.

Most organizations tend to customize the implementation of their Oracle Siebel applications. Hence it is necessary to engage SMEs early in the application development lifecycle to identify any possible mismatch between business requirements and implementation immediately, to prevent excessive rework and cost overruns. Engaging with SMEs helps eliminate the need to rely entirely on requirement documents - a far better approach to conducting a qualitative impact analysis - and ensures that all business rules and processes get tested.

Since some of the business flows are common to business processes, QA teams stand to gain a lot by automating and reusing existing business components. A small part of the functionality which is unique to the specific business process would of course need to be built separately. Both, automation and reuse help accelerate testing which in turn ensures better test coverage. They also help streamline the maintenance of scripts by providing a central repository which needs to be updated in case of changes to requirements. In fact certain business components can be reused during manual testing as well. However the maintenance of reusable manual test scripts is cumbersome and not advisable in all cases.

Reuse of existing business components allows teams to start with the scripting process even before the application has been developed, let alone wait for it to stabilize. Test planning and development can be initiated in parallel and time-to-market can be reduced significantly. Teams are able to analyze the business flow, identify reusable components, prepare test data and design a skeletal structure of the test scripts which can be easily updated once the application is available for testing. As per our estimates it is possible for teams to reduce the test planning phase by up to 40%.

**Infosys HP
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A New
Approach**

CONCLUSION

While business process oriented testing helps improve the quality of testing, we still need to adopt automation and reuse existing business components to ensure complete test coverage and reduce time-to-market. Even while automating testing of business processes, we need to exercise caution and select an appropriate approach. Does one follow a component based automation approach or a hybrid automation approach? In the end, all the difference will be made by the approach one adopts to test Oracle Siebel Applications. We for one believe that business process oriented testing, combined with component based automation, is the way forward.

Infosys and HP have developed an end-to-end business process testing solution, based on component level automation, which helps reduce time-to-market and improve quality of testing Oracle Siebel applications. The solution focuses on reusing existing business components and enabling early automation. Such an approach doesn't require complex driver scripts and enables early participation of business users and SMEs in the testing process. This crucial facet helps ensure the successful implementation and upgrade of Oracle Siebel applications.

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