



**ORACLE**

# **Lessons Learned on Seven (7) Siebel 8.0 Upgrades**

**NorCal OAUG  
Training Day 2009  
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# Agenda

- Review seven Siebel 8.0 upgrade projects.
- Understand what went well and what went wrong on the projects.
- Identify common trends in successful Siebel upgrade projects.
- Identify mistakes made on upgrade projects and how to avoid them on your upgrade.
- Learn lessons from these upgrade projects you can apply to your next Siebel upgrade.



# Robert and Ponder Pro Serve

- Joined Siebel in 1998.
- Specialized in Siebel upgrades and performance tuning while at Siebel.
- Leading speaker on Siebel upgrades while at Siebel.
- Works in the field helping customers perform Siebel upgrades and tune Siebel performance with group of trusted former Siebel/Oracle colleagues.
- Currently works for Ponder Pro Serve. Small consulting company with true experts in Siebel.
- Dedicated Oracle partner and Two Star OAUG partner interested in making Siebel customers successful.



# Seven Siebel 8.0 Upgrades

#	Industry	Duration	Customization	Highlights	Version
1	Pharma	4 months + 3 months	Nearly OOTB	Upgrade rescue	7.5 -> 8.0 SIA
2	Retail	14 months	Extreme customization	The most challenging 6 to 8 upgrade ever!	6.2 -> 8.0 SEA
3	High Tech	6 months	Medium w/ eScript	Normal upgrade that hit major issue	7.5 -> 8.0 SEA
4	Finance	7 months	Medium w/ eScript	Normal upgrade	7.5 -> 8.0 SEA
5	Insurance	15+ months	Medium w/ eScript	Large user base with remote	7.5 -> 8.0 SIA
6	Pharma	9 months	Medium w/ eScript	Normal upgrade with specific challenges	7.8 -> 8.0 SIA
7	Finance	5 months	Medium w/ eScript	Normal upgrade with specific challenges	7.5 -> 8.0 SIA
8	Telco	24 months+	Extreme customization	Project in deep trouble	6.3 -> 7.8 SIA

# Summary of the Projects

- Ranged from what should have been a very straightforward upgrade to the most complex Siebel 8 upgrade we are aware of.
- While there was commonality across the projects there were many unique challenges faced by each upgrade.
- None of the upgrades were easy.
- Many of the upgrades also included DBMS upgrades to Oracle 10.2.0.3/10.2.0.4.
- Many of the upgrades required significant work to get performance where it needed to be.
- Our involvement varied from prime system integrator to 911 upgrade support when serious issues were encountered.

# Outline for Each Project

- Company background
- Previous upgrade experience
- Project goals / objectives
- Major challenges faced
- PPS role on the project
- Team size
- Project duration
- Surprises
- Things that worked very well
- Mistakes made
- Key lessons learned

# Some PPS Siebel Upgrade Best Practices

- Make the very best decisions possible on your upgrade project and remember the right decisions are not always obvious.
- Take time to plan and estimate your upgrade project by doing an upgrade assessment. We like to include a proof of concept upgrade that forms the basis for our level of effort estimate.
- Build new Siebel dev, test and prod and upgrade a copy of your production database leaving the old Siebel enterprise in tact and ready to use if needed.
- Start performance testing early since fixing issues such as memory leaks can take a long time.
- Be sure to do practice runs of your production upgrade. Practice makes perfect.

# PPS Siebel Upgrade Best Practices Cont

- Test your application thoroughly in your upgraded new production environment and not just in your test environment. Requires careful planning to be able to test in new prod and do your practice runs.
- Get the best help possible on your upgrade project.
- Keep team size small. You don't need an army of consultants to do your Siebel upgrade.
- Avoid any last minute changes to your practiced upgrade procedure, SRF, etc.
- Don't let meeting your deadline cause you to make bad decisions.

# Pharma 7.5 -> 8.0 SIA

- EMEA Pharmaceutical company with small IT staff and a few hundred call center users.
- PPS received emergency call that Siebel 8 QA upgrade would not work after several failed attempts to run it.
- When we engaged the project team was "gutting" the Siebel upgrade scripts and deleted numerous SQL statements in a last ditch effort to make/force the QA upgrade run.
- Near vanilla. Should have been a very easy upgrade but was not!
- After some research we realized that the SEA version of Siebel was used to run the dev upgrade so all the SIA tables for 7.7, 7.8 and 8.0 were missing!
- Hard to tell at first since SEA was installed, dev upgrade ran, then SEA was uninstalled and SIA installed so everything looked correct in dev.
- Consultant from large Siebel consulting company admitted this was the case but only after we had undeniable proof. Said he wondered if it might cause a problem.
- We reran the upgrade correctly in our labs in order to save time and gave the customer an upgraded Siebel SIA application with the majority of the kinks worked out in just a few days.

# Lessons Learned

- Be sure you know who is running your upgrade. "We" have done a number of upgrades may not mean the actual people doing your upgrade have ever run an upgrade before.
- Be sure the person running you upgrade knows the process, has read bookshelf and has done a Siebel upgrade before. We think this consultant may have worked on one or more upgrades in a configuration role but was not familiar with the server installation tasks and the actual running of the upgrade.
- Ask for and check references on all your consultants even if they are from a company you know and trust.
- Never underestimate any Siebel upgrade. A large consulting company sent someone who was not up to the challenge because they knew the implementation was nearly OOTB and thought this would be an easy project. This upgrade is vanilla – you can handle it. Not!
- Be very careful to get your Siebel version correct when building images. We have seen the wrong version of Siebel imaged and even installed at a few customer sites.
- The Siebel upgrade normally runs very smoothly in test. If it does not then trying to delete SQL statements that are failing from the upgrade scripts is never the answer.
- Know what to expect when the Siebel upgrade runs.
- Testing on Siebel upgrades is huge and repeating it is expensive.

# Retail 6.2 -> 8.0 SEA

- Customer had been hoping to upgrade off 6.2 for several years and had done careful planning on how to go about their upgrade.
- Large number of call center users but most orders taken via interactive voice response (IVR) interface with Siebel.
- Numerous huge challenges including:
  - Highly complex with significant amount of custom code.
  - Very large database that would need upgrade tuning.
  - True zero downtime allowed.
- Did not want to use the common big bang approach to Siebel upgrades since Siebel ran this company's business.
- Needed to convert large body of Siebel VB to eScript.
- Project started out on version 7.8 and then moved to 8.0 soon after 8.0 was initially released.
- Project encountered numerous 8.0 product issues that have since been fixed. Thanks to this project Siebel 8 is very solid today for other customers.
- Extensive Oracle 10g tuning performed. This is where we developed the PPS init.ora recommended parameters. Zero stored outlines required and did not have to drop stats on zero row tables.
- Incorrect server architecture initially configured and had to be redone.
- Upgrade also required Genesys upgrade to GPlus 7.5 and we provided the support for this effort.

# Lessons Learned

- Zero downtime Siebel upgrades are possible but are not easy.
- Having a Siebel 6.2 and 8.0 application coexist and share data is possible and was a key to making this Siebel project successful. Big bang to Siebel 8.0 would have failed. Coexistence allowed Siebel 8 issues to be resolved as users slowly migrated off version 6.
- Don't underestimate the amount of time for Siebel upgrade tuning if you have a very large Siebel database that will be significantly impacted by the upgrade. For this customer the first upgrade (2-step since we came all the way from 6.2) required four (4) weeks just to run for the initial baseline before tuning could begin.
- Don't underestimate the time required to convert large bodies of SVB to eScript, even with the help of PPS Tools Helper.
- Siebel ST engine is much better than old T engine but does behave differently in a number of ways.
- Proper use of the offshore model is possible and for this customer it meant staying in control of work and carefully managing how the offshore team fixed each given type of problem with the converted eScript code.
- We were all surprised by the initial product defects we found with Siebel 8.0 and are happy to see these have since been addressed by Oracle.

# Finance 7.5 -> 8.0 SEA

- Another repeat customer. As Siebel employees we helped them with their 7.5 upgrade go live after they had a very long upgrade from 6.x.
- Did a very thorough upgrade assessment that included walking users thru new product features of 7.7, 7.8 and 8.0. Also included a proof of concept upgrade and demonstrating customer's application in 8.0.
- We were all surprised by the changes in Siebel Data Quality. New Siebel DQ API is much better than old script based approach but 300K new licensing from DQ vendor was not expected.
- Upgrade went very well overall. Customer was very surprised how quickly application was upgraded and ready for testing. We used proprietary advanced techniques and PPS Tools Helper to quickly fix many common Siebel upgrade issues.
- Improved desktop integration to use Siebel web services instead of COM interfaces for increased performance and stability as part of the project.
- Followed all best practices except did not spend as much time testing in new prod environment as we could have.
- Prior to go live experienced severe crash problems related to new DQ module that DQ vendor fixed prior to go live. This caused our initial go live date to be missed.
- Hit two CTI related crashes during prod go live. One was fixed for Oracle the other was fixed by changing custom eScript code that had a bug. Neither of these crashes were ever encountered during testing.
- Spent extensive time tuning Oracle 10g for optimal performance. Implemented PPS init.ora recommendations and statistics strategy. Zero stored outlines and did not have to drop stats on zero row tables.
- Upgrade also required upgrade to GPlus 7.5.

# Lessons Learned

- Even with a detailed upgrade assessment you can still run into surprises like the DQ API change that we were not aware of at the time.
- Bring your "A" game for the production go live. Have advanced debugging tools installed and ready to go ahead of time to be able to troubleshoot production crashes instead of trying to learn how to do this after the crashes start.
- We implemented automated listing of active tasks every 30 minutes. Made tracking down log files for users reporting issues hours later very simple. Later we learned of `s_srm_task_hist` which gives much the same info but does not available as long as the saved active session info.
- Even highly customized applications can be upgraded fairly rapidly with the right tools and techniques.
- ST eScript engine differences should not be underestimated.
- Automating post upgrade Siebel admin tasks is worth the effort.
- Automating verification of post upgrade tasks is also worth the effort.
- Huge performance improvements possible on Siebel 7.5 upgrades but you have to invest the time in tuning to realize them.
- Customers can perform the Siebel upgrade with their own staff as long as they get some specialized Siebel upgrade assistance and help on their more difficult problems encountered.

# High Tech 7.5 -> 8.0 SEA

- We received 911 call days prior to go live on this upgrade that a severe memory leak existed.
- Worked with customer to identify root cause of memory leak and submitted OOTB test case to Oracle Technical Support to reproduce.
- Got great support from Oracle on expedited QF but go live date was still missed.
- Customer will go live on 8.0 soon and is happy with upgrade although they did miss their initial target date.

# Lessons Learned

- Don't wait until the very end of your project to perform load testing. If Oracle will require 4-6 weeks to produce a QF you should factor that into your test plans.
- Fairly easy to spot memory leaks before load testing if you know what to look for.
- Workarounds are possible for some Siebel issues. In this case we had two work-arounds for the memory leak issue that worked just fine for other customers but for this customer neither of the two work-arounds were viable.
- Testing Siebel is the biggest part of most Siebel 8 upgrades. Third work around could not be used since it would have required too much testing. Had to wait for QF from Oracle.
- Test the biggest parts of your Siebel architecture early and make sure they work correctly. For this customer navigated GotoView was the a key component of their architecture.

# Insurance 7.5 -> 8.0 SIA

- Began talking with this customer via a word of mouth reference another upgrade customer gave. We engaged to help with odds and ends of specialized tasks customer and their SI were not fully prepared to handle. Mainly advanced trouble shooting, running PPS Tools Helper and SQL Record/Playback.
- Customer uses DB2 and has a large number (10,000) of remote users.
- Upgrade went pretty well but did run into a few Siebel product defects. Ultimately all product defects were addressed.
- Siebel 8.0 application find was a major issue for this customer. End users did not like new functionality.
- Upgrade was scheduled to go live in early 2009 but will likely go live later. Currently evaluating 8.0.0.5.

# Lessons Learned

- A given Siebel product defect that might not matter very much at all for one customer can be a total show stopper for another customer. E.g. Immediate Post Change button double click was huge on this upgrade but did not matter on other upgrades we were involved with.
- Siebel upgrades are critical projects that can make or break a company's abilities to do business. If things don't go perfect and/or if there are external forces at work don't be surprised if your upgrade gets delayed until the business feels the time is right.

# Pharma 7.8 -> 8.0 SIA

- This customer likes to be on the current Siebel version and uses Siebel globally.
- Oracle 10g (10.2.0.4) upgrade and UNICODE upgrade included as part of this upgrade.
- Technical upgrade with several new features added to Siebel implementation.
- All upgrade best practices were followed.
- All environments including production ran on VMware ESX. This is the very first customer in the world we know of who runs everything on virtual machines in production.
- The saga of the changed application find. Why did Oracle do that? We developed a custom search center that looks and works exactly like 7.8 did (but were just barely able to do so).
- Extensive Oracle performance tuning performed as part of this upgrade. Zero stored outlines and did not need to drop stats on zero row tables (again). PPS SQL Record/Playback used to confirm moving from 10.2.0.3 to 10.2.0.4 would actually improve performance!
- Refactored problematic eScript as part of fixing other issues related to ST engine.
- Existing memory leaks related to bad eScript all fixed as part of this upgrade.
- Customer relationship began with 911 emergency call on their 7.8 upgrade related to OM crashes in production.
- Currently evaluating 8.1.1 and Oracle 11.

# Lessons Learned

- Migration to ST engine not to be underestimated especially if any existing code is not as beautiful as it could be. In this case lack of proper try/catch/finally gave us a lot of issues.
- Oracle can change existing functionality in ways you don't expect that might not be what you want such as the application find.
- Same issue of changes that did not matter at all to other customers being huge potential show stoppers for other customers.
- Have to be very cautious when applying Siebel QF's.
- Again we see that testing is a huge part of the Siebel upgrade. Cost of testing a QF = \$\$\$k.
- 10.2.0.3 client with patch 7 and 10.2.0.4 server works well.

# Finance 7.5 to 8.0 SIA

- Began project in 2007 but project put on hold and started back up in 2008 with a Dec 25, 2008 production go live.
- Siebel Finance application used over the Internet to member companies.
- Oracle 10g upgrade included as part of the upgrade.
- PPS init.ora and statistics strategy. Have to prove performance better when your recommendations are different than Siebel/Oracle.
- Statistics challenges related to Siebel Remote and S\_DOCK\_INITM\_xx.
- Extensive Oracle performance tuning performed as part of this upgrade.
- Customer performed upgrade on their own with help from us at the very beginning during dev upgrade, production go live and occasional help during remainder of the project.
- Practiced production upgrade many times and worked out all issues.
- Production go live as smooth as we have ever seen. Non event for IT. Main issue reported was end users needed to add new URL to trusted sites.
- Users very happy with new application and noticed it is much faster than before.

# Lessons Learned

- Customer's staff can perform the Siebel upgrade with just a little specialized help. PPS helped with upgrade and Siebel TAM/ES helped with other key tasks.
- Having a long 4 day weekend to perform the Siebel upgrade is very nice and allows plenty of time to get everything done.
- Oracle statistics strategy is key but the general recommendations of software vendor did not work well. E.g. Siebel documentation does not mention system statistics and other topics key to getting excellent performance on Oracle CBO.
- PPS SQL Record very effective at identifying and prioritizing problem SQL.
- Siebel upgrades can go very smoothly if you plan and execute them correctly.
- Google Analytics very helpful for HI applications deployed over the Internet. Excellent usage and browser capability tracking.
- “Sticky Manager” technique worked extremely well to coordinate dependencies between different groups on go live weekend.
- Small team size again proves to be very effective on Siebel upgrades.

# Telco 6.3 to 7.8 SIA

- Highly customized Telco.
- Talked with customer two years prior about Siebel upgrade planning but was not involved with actual upgrade.
- Received emergency 911 call that eConfigurator performance has horrible and intended go live is mid January 2009. First time we have spoken with this customer in two years!
- This customer was also in the process of just beginning upgrade tuning with just one month till planned production go live.
- Based on the little we know this project is heading for probable trouble.
- Customer has not yet engaged us to help. We are pretty sure this project will be delivered late and will need a good bit of work (months) in order to go live.

# Lessons Learned

- Severe performance problems should be identified early in the upgrade process. Realizing you have show stopping performance issues one month prior to go live is not acceptable and can be avoided.
- Don't ignore bad performance in dev, test and other environments.
- If you think you might need Siebel upgrade performance tuning start early and beware of the dangers of modifying the Siebel provided upgrade scripts.
- Project issues/problems are pretty easy to spot but you have to know what to look for and not ignore/deny them.
- The number 1 worst mistake you can make is to let the pressure of your project deadline cause you to attempt to go live when you are not ready. Disaster waiting to happen. Search “Siebel upgrade snafus” for a prime example from 2003.



# Questions & Answers

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# Resources

- Database Upgrade Guide.
- Oracle Online Community (Ospace) is now live and can be found at:
  - <http://www.oracle.com/applications/community/index.html>.
  - There is a forum called Install / Upgrade / Manage
- SupportWeb -> Installation and Upgrade -> Install/Upgrade Portal, especially Alert 1322: Siebel 8.0 Upgrade – Important Steps to a Successful 8.0 Upgrade.
- <http://www.ponderproserve.com/support.html> for several other detailed .ppt, especially Part I & II OAUG web seminar.

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# To-Do



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