Customer Case Study
Real Application Testing Usage at DIRECTV
SPA Usage at DIRECTV

**Background**
- Large Siebel 7.7 call center implementation: 12.5 TB database
- 2-Node HP Superdome server, total 224 CPUs, 25+ App Servers
- High transaction volume, 18k concurrent users, business critical application

**Challenges**
- Expensive downtime: $$$$/hr
- Lengthy database/application restart: $$$$/hr
- Multiple team coordination
- Application Upgrade and complexity: 109k SQL statements

**SPA usage at DIRECTV**
- Utilized to upgrade from Oracle Database 9i to 10g
- Use it to validate all DB changes in Oracle Database 10g
  - CBO statistics refresh
  - Addition of new indexes
- Few customizations done to handle complexity of the environment
Focused on SQL with high executions to limit scope of work while covering majority of workload
- SQL with executions > 70/day constitute 99% of all SQL executions and 70% of all buffer gets

Only 6 out of 109k SQL statements had to be tuned post go-live on Oracle Database 10g
- SPA helped find the needle in the stack!
- Regressed SQL had same execution plans as in 9i, but different in 10g due to bind peeking
Most features worked as advertised
- Few limitations with BIND variables
  - SPA only executes one set of BIND DATA
  - More than 4k BINDS per SQL and BINDS of complex data types (CLOB,BLOB) are not captured by STS
- These can be handled through Database Replay, STS compare functionalities and SPA 11g R2

Analysis of SQL is fast and efficient
- Trial of about 60k SQL completed in 6 hours
- A change can negatively impact thousands of SQL – need to reduce to a manageable set by using custom filters

Huge success with SPA
- CBO stats refreshed on 10g with only 3 regressed SQL – all non critical
- Addition of Indexes – improved workload performance
Evaluate CBO Stats Refresh & Indexes on 10g: Lessons Learned and Summary

- SQL related impact to the business significantly reduced compared to 2009
- No SQL related Incidents since testing with SPA for last 6 months
- Workload SQL response time improved by 25%