

ORACLE®



Managing Change With Oracle Real Application Testing

CMG Canada, Oct 21st 2008

Oleksiy Razborshchuk

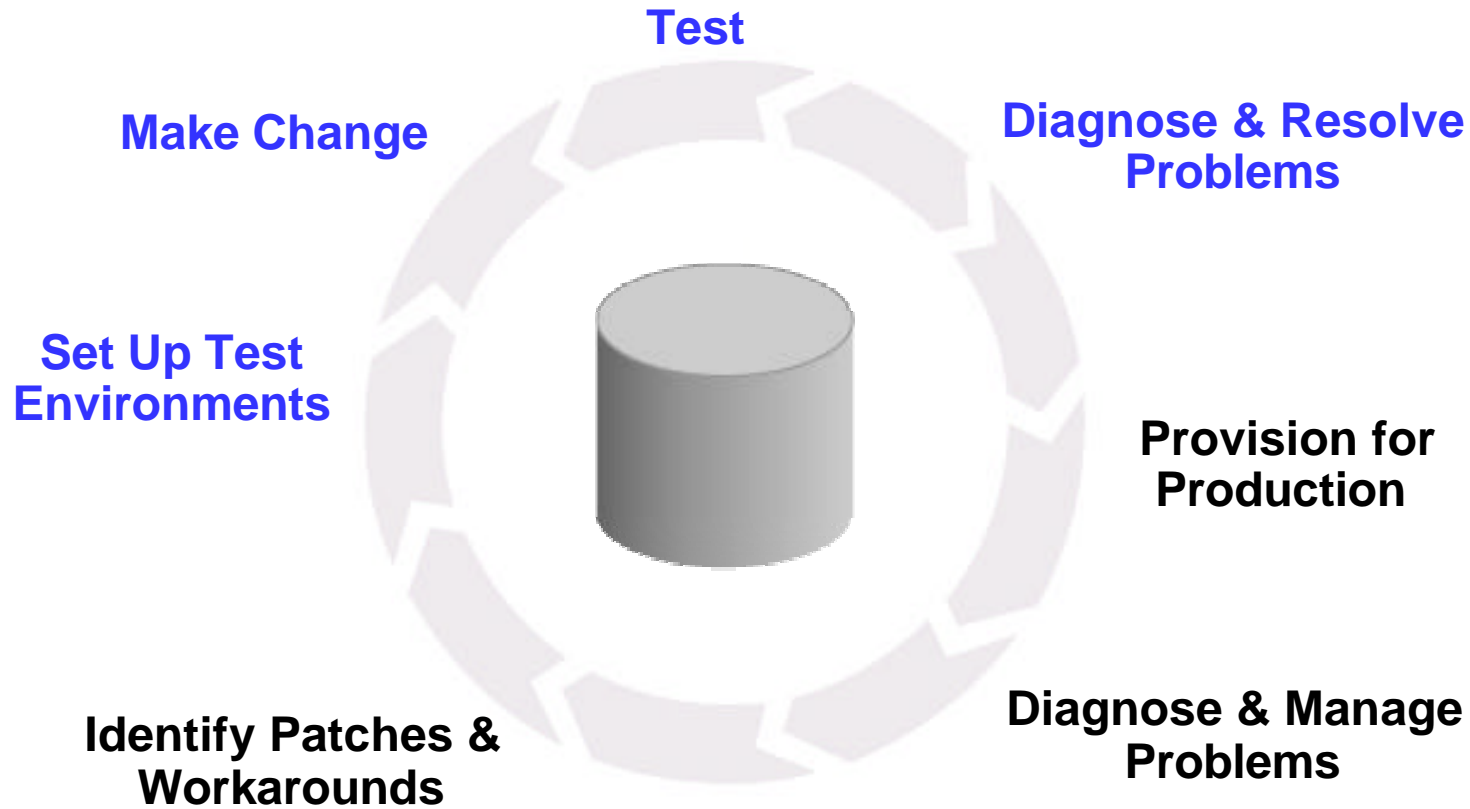
Principal Solution Architect, Oracle Canada

Oleksiy.Razborshchuk@oracle.com

Top 3 DBA Activities

- **Ongoing Administration**
 - Challenge: **Manage More with Less**
- **Performance Management**
 - Challenge: **Sustain Optimal Performance**
- **Change Management**
 - Challenge: **Preserve Order amid Change**

Lifecycle of Change Management

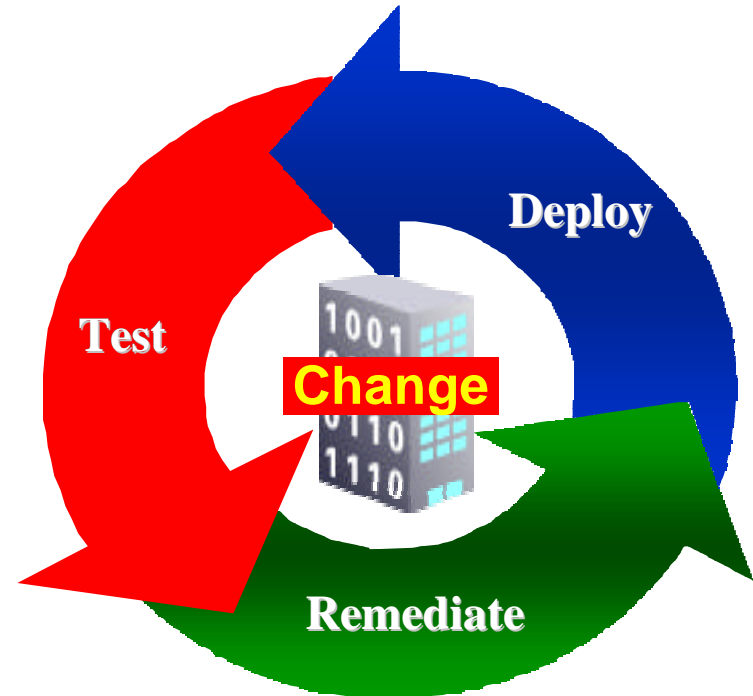


Real Application Testing

Adaptive Change Assurance

Real Application Testing

- Technology benefits
 - Rapid technology adoption
 - Higher testing quality
- Business benefits
 - Higher agility
 - Lower risk & cost



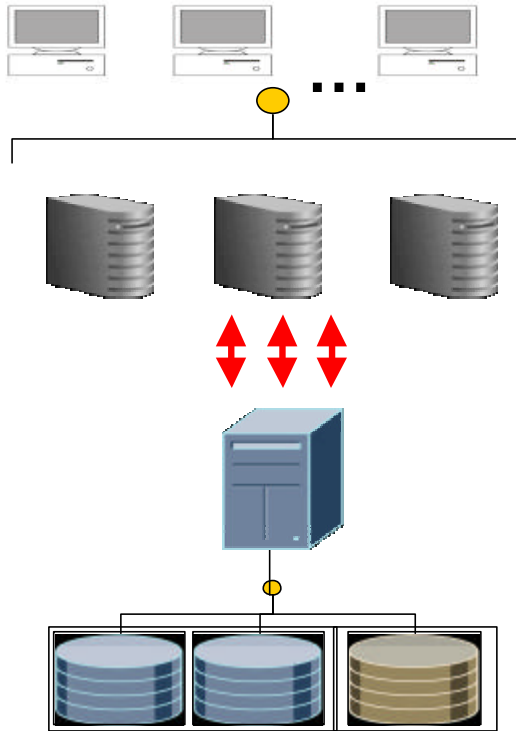
Solution for the Agile Business

Real Application Testing

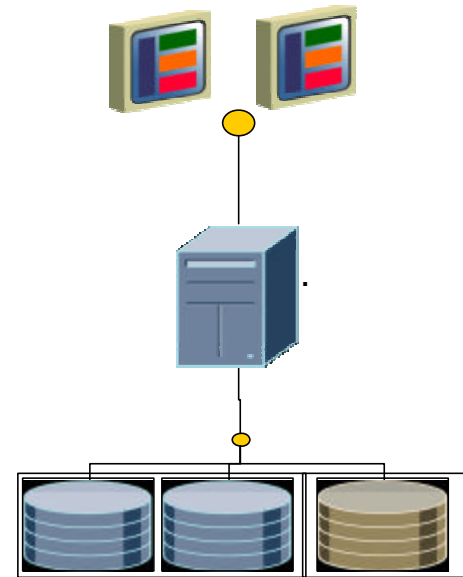
- Product Components
 - Database Replay
 - SQL Performance Analyzer
- Change assurance for:
 - Database and O/S upgrades
 - O/S migrations, i.e. Windows and Linux
 - Configuration changes, e.g., conversion from single instance to Oracle RAC, Oracle init.ora parameters, adding index
 - Storage changes, e.g. migration to ASM

Database Replay

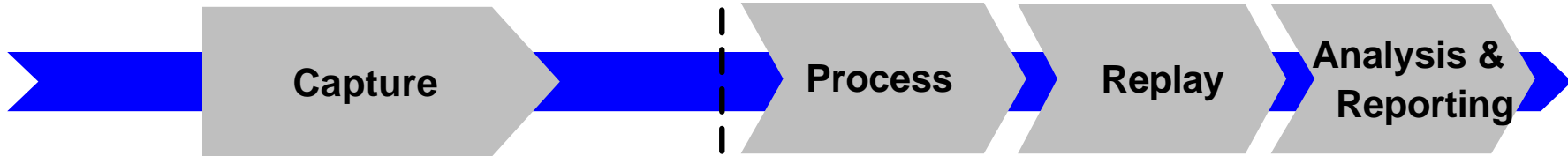
Production



Test



 Capture



Database Replay Comparison

- ✓ Database *Time Machine*
- ✓ Technology that can only be built by Oracle

	Oracle Database Replay	3rd Party Load Testing Tools
Workload	Real application workload	Artificial simulated workload
Test Coverage	100% of workflow	1-5% of workflow
Test Effort	<ul style="list-style-type: none">• Simple app: days• Complex app: days	<ul style="list-style-type: none">• Simple app: weeks• Complex app: months

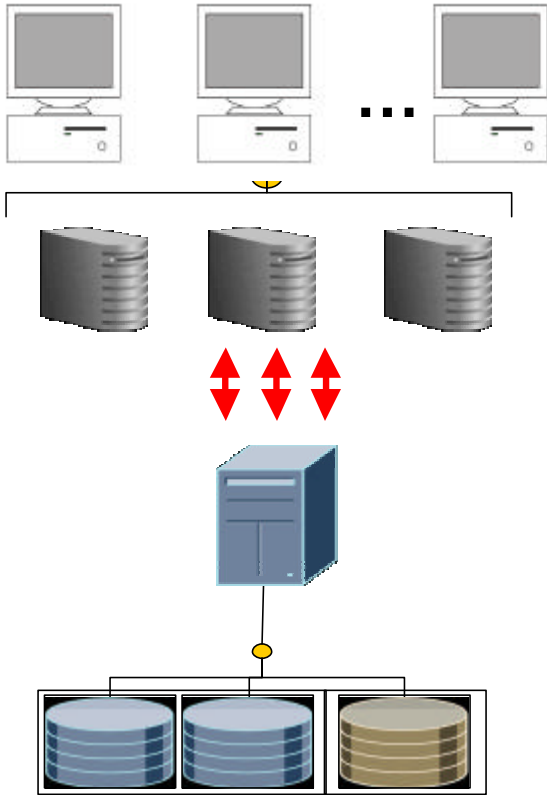
DEMO – Database Replay

Database Replay Demo shows:

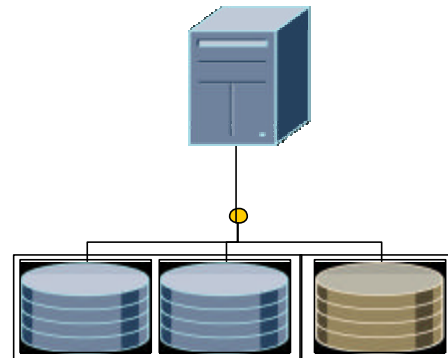
- Capture of a production workload with minimal overhead
- Replay of the captured workload on a test system while maintaining the concurrency, timing, and transaction dependencies of the original workload
- Ability to alter the characteristics of replay, such as think time between successive user calls, with the help of several optional parameters
- Generation of reports to compare the performance of a capture with a replay or of one replay with another replay

SQL Performance Analyzer

Production



Test



Capture SQL

Transport SQL

Execute SQL
Pre-change

Execute SQL
Post-change

Compare Perf

SQL Performance Analyzer Comparison

✓ Technology that can only be built by Oracle

	Oracle SPA	3rd Party SQL Testing Tools
Capture with low overhead	Yes	No, require explicit polling & external storage
Test with production context	Yes	No, not integrated with optimizer
Transfer resolutions to production	Yes, integrate with SQL Tuning Advisor & SQL Plan Management	No

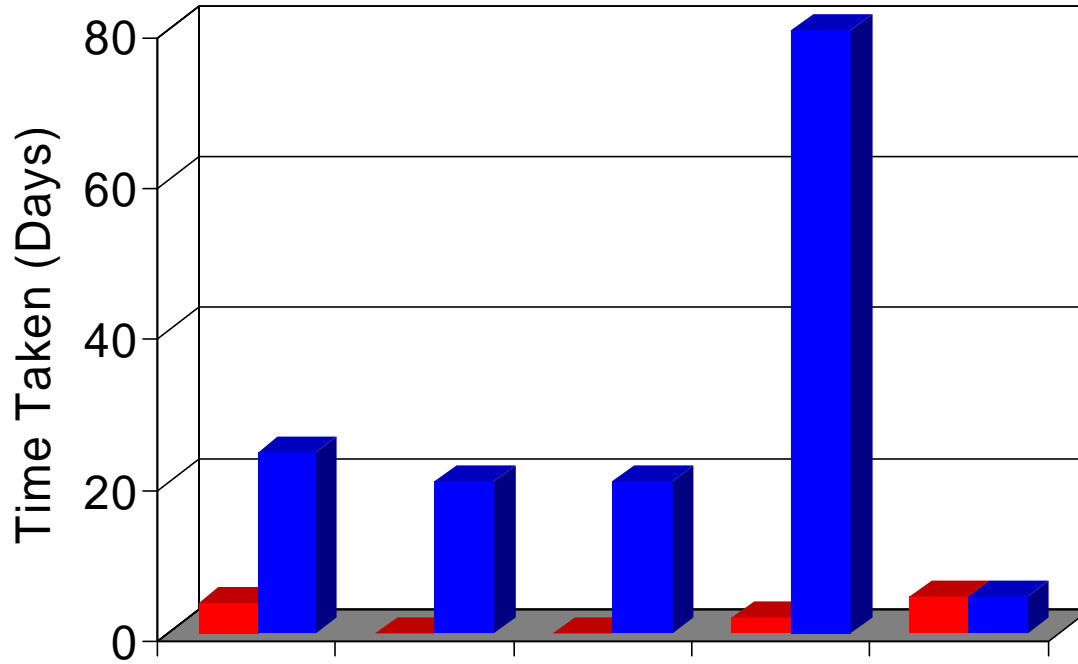
DEMO - SPA

SPA Demo shows:

- Ability to identify SQL performance improvements and regressions resulting from a change for complete SQL workloads
- Integration with the SQL Tuning Advisor and SQL Plan Baselines to automatically tune regressed SQL

Test Effort Comparison

Application Tested: Oracle E-Business Suite



■ Real Application Testing
■ LoadRunner

Install & Setup
Understand Application Usage
Identify Key Transactions
Generate Test Scripts
Run Test

Total Testing Time

Database Replay: 2 weeks
LoadRunner: 30 weeks



Demonstration

Real Application Testing Advantages

Real Application Testing

Traditional Testing Tool

Production workloads

Artificial workloads

Complete workflows

Partial workflows

Days of development

Months of development

Automated

Manual intensive

Low risk

High risk

**2
Weeks**

**30
Weeks**

For More Information

<http://search.oracle.com>

database manageability



or

www.oracle.com/manageability

Q&A



ORACLE IS THE INFORMATION COMPANY