

Smarter Workload Optimization – IBM Software And POWER Unleashed

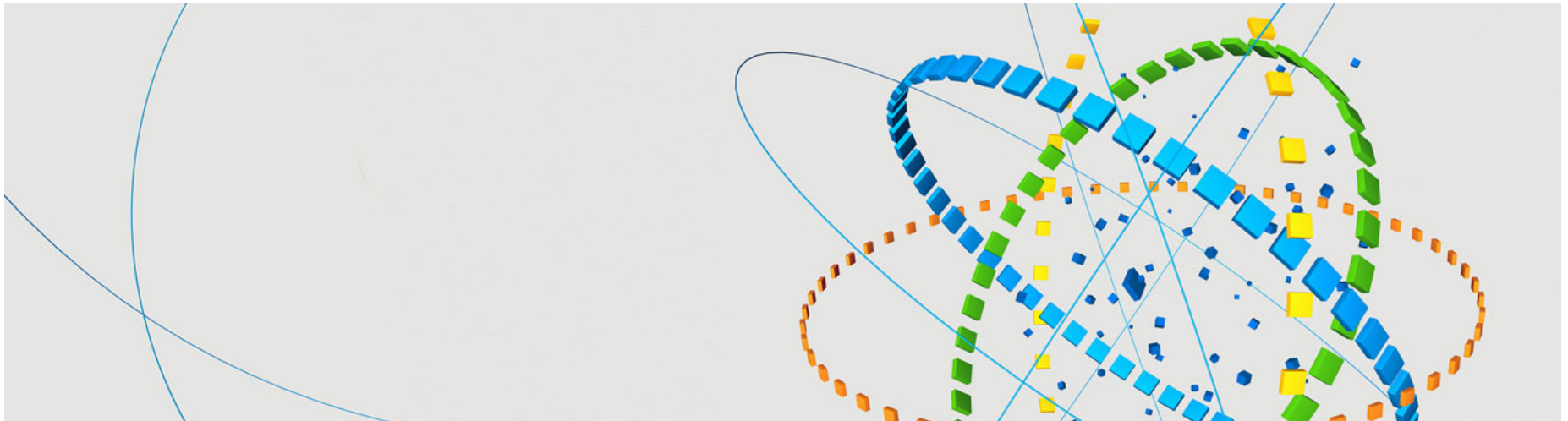


It Is Easy To Switch To IBM – Easy Migration Workloads, Scenarios And Resources

IBMDiscoveryDays2011

Copies of Today's Presentations:

<http://www.ibm.com/developerworks/offers/techbriefings/details/power.html>



Why Switch To The Power Systems Stack?

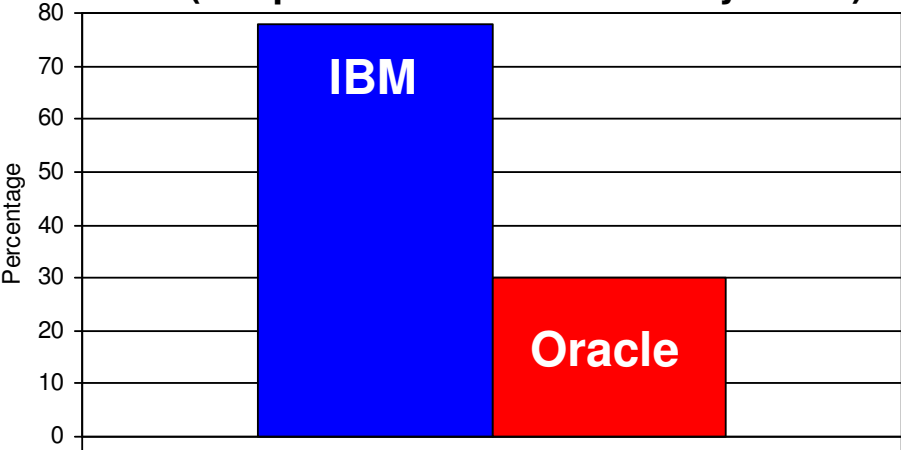
- Power Systems deliver **superior performance per core**
- IBM software is **optimized** for Power to achieve superior performance at the lowest cost per workload
 - ▶ More efficient web facing workload
 - ▶ More efficient transaction processing
 - ▶ More efficient business analytics
- Large Power servers are ideal platforms for **workload consolidation**
- **Private clouds** built on Power with IBM integrated service delivery management can improve your service delivery and reduce costs

Reasons To Be Dissatisfied With Oracle

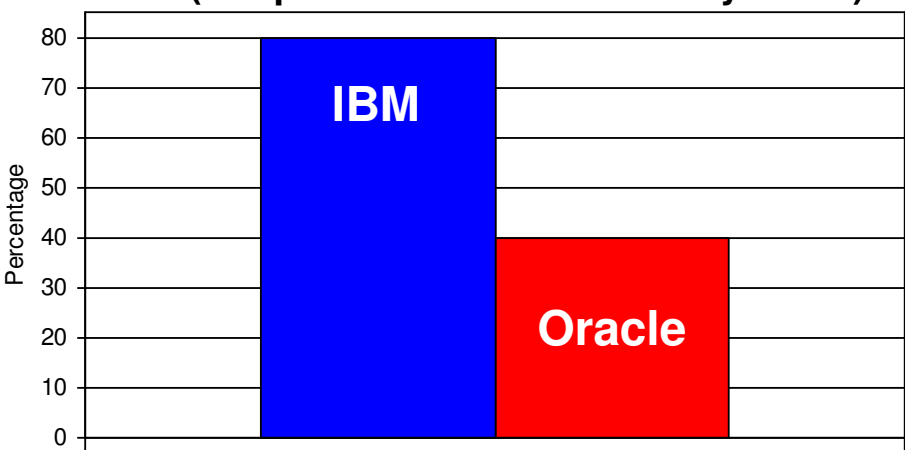
- SPARC processors are uncompetitive
- Oracle is not making the investments necessary to bring SPARC to a competitive level
- Confusing software strategy
- Changed Sun support policy to require all servers to be at same support level (thereby increasing costs)
- Want to avoid lock-in to single vendor
- Exadata one-size-fits-all does not fit your needs
- Not willing to wait for Exalogic virtualization and private cloud support

The Vendor You And Your Customers Choose Makes A Difference!

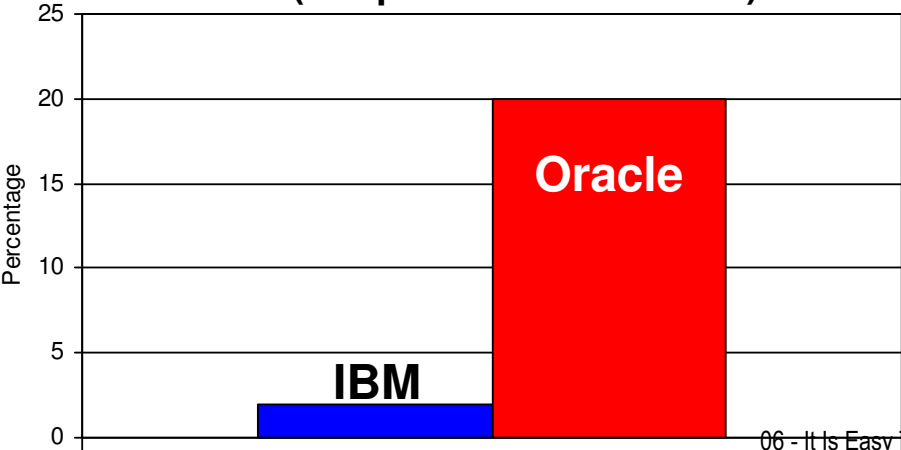
Product Performance, Service, Support
(Responded Excellent or Very Good)



Database Satisfaction
(Responded Excellent or Very Good)



Product Performance, Service, Support
(Responded Dissatisfied)



Source:

ITIC Reliability Survey, February 2011
(468 Businesses worldwide)
*“Oracle Users
Anxious/Angry Over Service,
Support Slippage”*

Security Matters – The Vendor You Choose Should Have A Proven Good Record!

DB2 Security

- 10 security related patches in the last 10 years
- Proven Multi Level Security
- End-to-end encryption via hardware assist
- Optim Test Data Management
 - ▶ Ensures anonymous access to data necessary for testing
- Optim Archiving Expert
 - ▶ Allows customers to easily archive and access data
- DB2 Audit Management Expert
 - ▶ Supports compliance requirements
 - ▶ Consul for enterprise wide audit

Oracle's Security Exposures

- **Oracle.com – July 2010**
78 security patches, including **13** for the database
- **Oracle.com – April 2011**
73 security patches, including **6** for the database
- **Oracle.com – January 2011**
66 security patches, including **6** for the database
- **Oracle.com – October 2010**
85 security patches, including **9** for the database

In the last year Oracle has issued 302 security patches, **34** for the database

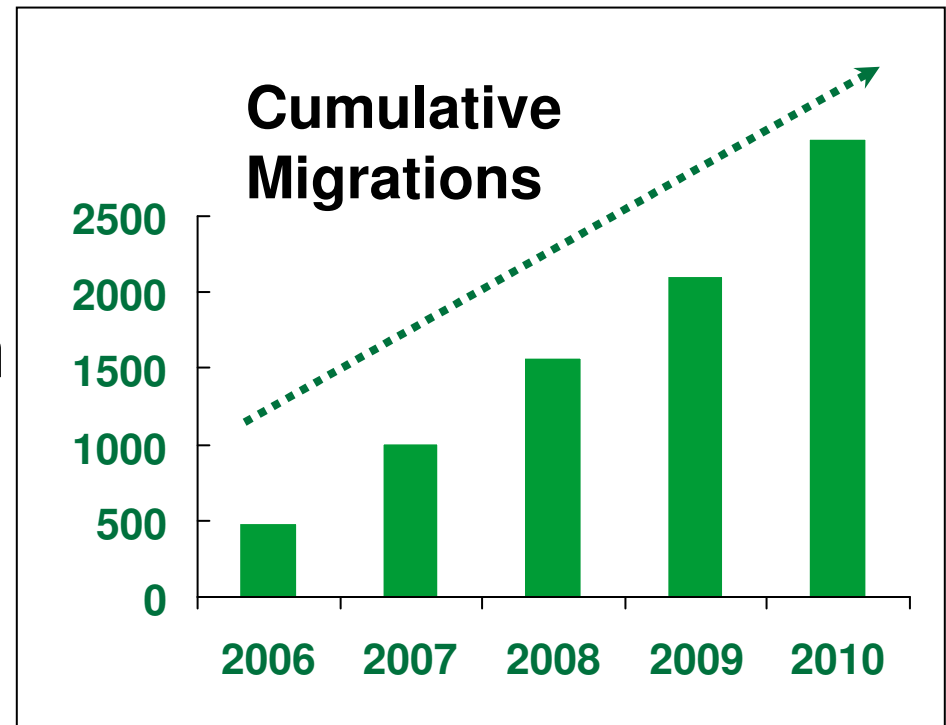
Why Do You Think So Many Customers Are Migrating To POWER-based Solutions

3,583+

Read about hundreds of customer successful migrations:

<http://www.ibm.com/systems/migratetoibm/casestudies/>

Successful migrations to IBM Power Systems from Oracle and HP



Note: 3,583 customers that paid for migration services as of June 2011

Recent Oracle To IBM Power Migrations



Baylor College of Medicine finds new IT muscle

- 32 Sun Servers to 3 Power Servers
- Dramatic energy, space and system costs reductions
- 30% overall performance improvements
- Mission critical 24/7 support of 355,000 patients and 1,500 medical research staff

Adecco

better work, better life

Customer management system supporting 2,000 to 2,500 concurrent users, as well as payroll and financial data

- Enabled payroll batches to run three to four times faster
- 600 percent improvement in performance for commissions process
- Replaced 50 HP & Sun servers with a five-node cluster of Power servers



Davis + Henderson Company Largest Financial Company in Canada

172 WLS Application Servers on 67 Sun Boxes
200 Oracle database cores on 80 Sun Boxes



2 IBM Power 770
3 IBM Power 740

Massive German University Competency Center Expels Oracle-Sun



The University Competence Centers (UCC) at the Technical University of Munich (TUM) chose IBM Power Systems, DB2 and IBM storage solutions to support more university students and research projects.

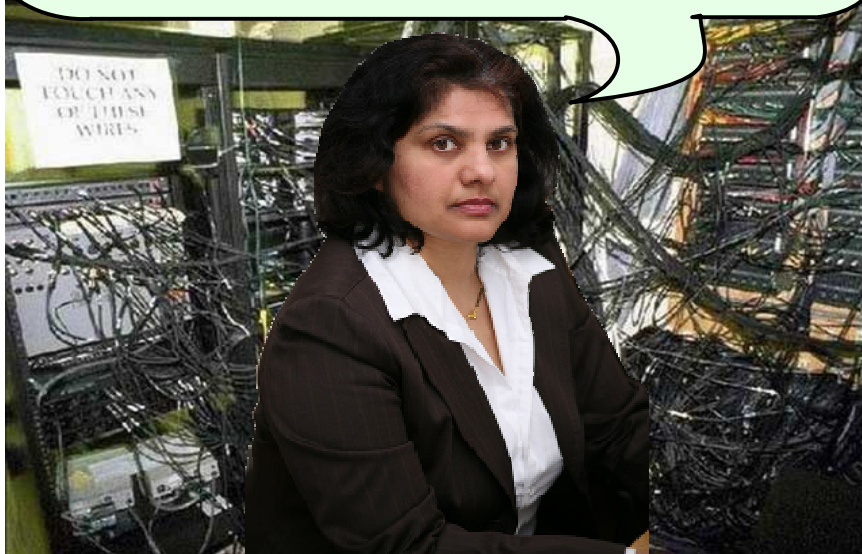
Sun servers and the Oracle DB were replaced with Power and DB2 in order to support 28,000 students at 144 universities in Europe, the Middle East and Africa.

The UCC at the TUM provides students with access to SAP products and services offered for research and teaching.

“With the support of IBM, we will save energy and need less space to operate while being able to expand our research opportunities in Business and Information Systems Engineering,” said Professor Helmut Krcmar, Academic Director of SAP UCC TUM and Professor of Economics at the TUM.

Get Started On The Journey, Easy Migration Workloads, Scenarios And Resources

How do we get started?



Migration capability is part of the total IBM solution. We have the hardware, software, services and tools to get you started.



Keys For A Successful Migration

- **Workloads that you can migrate yourself**
 - ▶ Planning and project management to identify workloads
 - ▶ Migrate easy workloads first
 - ▶ Leverage IBM tools, products, and migration guides

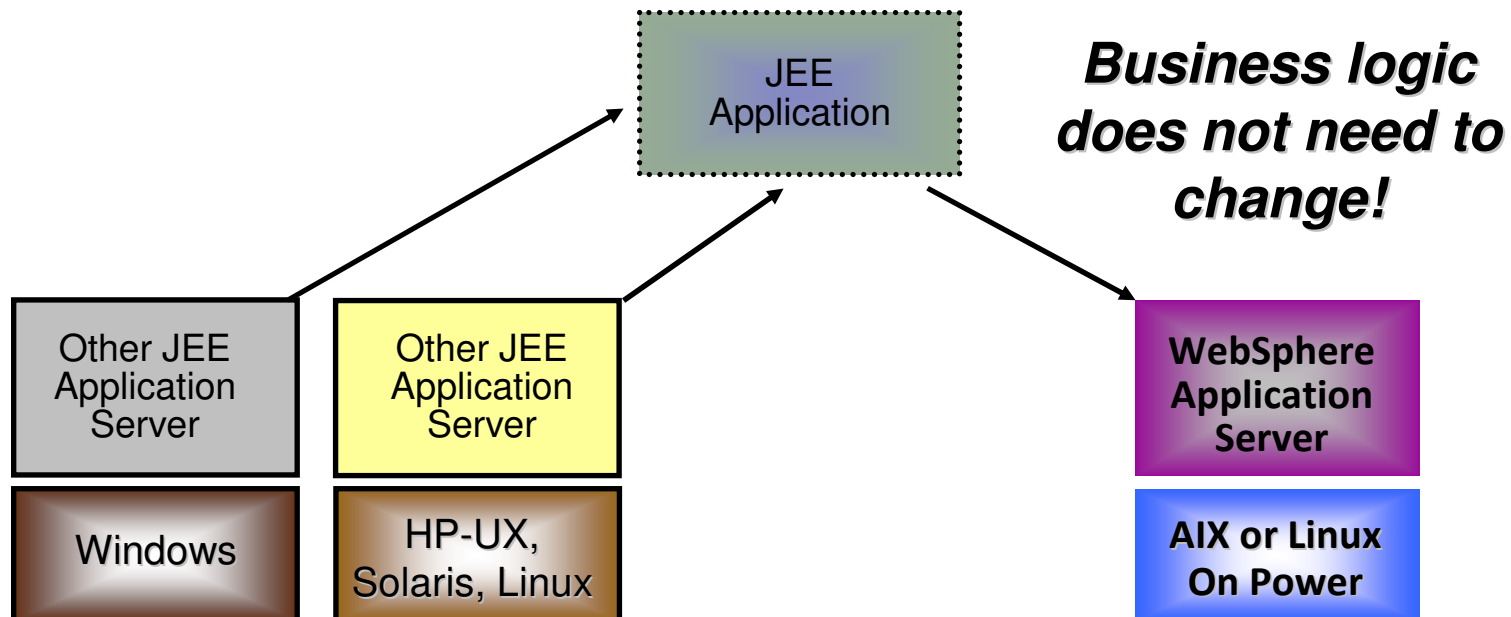
- **Workloads that you cannot or may not want to migrate yourself**
 - ▶ Difficult, massive or complex workloads
 - ▶ Engage IBM's skilled services teams or IBM's Business Partners

Workloads That You Can Migrate Yourself – Easy Migration Scenarios To Get You Started

- Migrate an application from Oracle WebLogic on Solaris to IBM WebSphere Application Server on Power Systems
 - ▶ IBM WebSphere Migration Toolkit
- Migrate an Oracle Database on Solaris to IBM DB2 on Power Systems
 - ▶ Oracle DB to IBM DB2
 - ▶ Use built-in IBM DB2 compatibility capabilities like PL/SQL procedures
- Migrate workloads from Oracle Solaris to IBM Power Linux
 - ▶ IBM Migration Kit for Solaris OS to Linux

Take Advantage Of Java's Portability To Migrate JEE Web Workloads And Applications

- JEE provides a common environment model for web applications
 - ▶ **Insulates** applications from the rest of the system
 - ▶ **Write once, run anywhere** (JEE)
 - ▶ Platform for developing and deploying **Web Services**

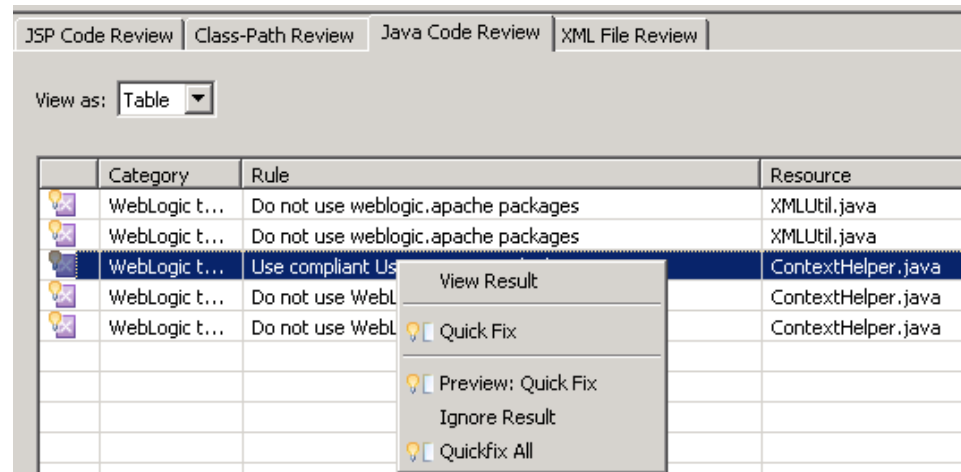
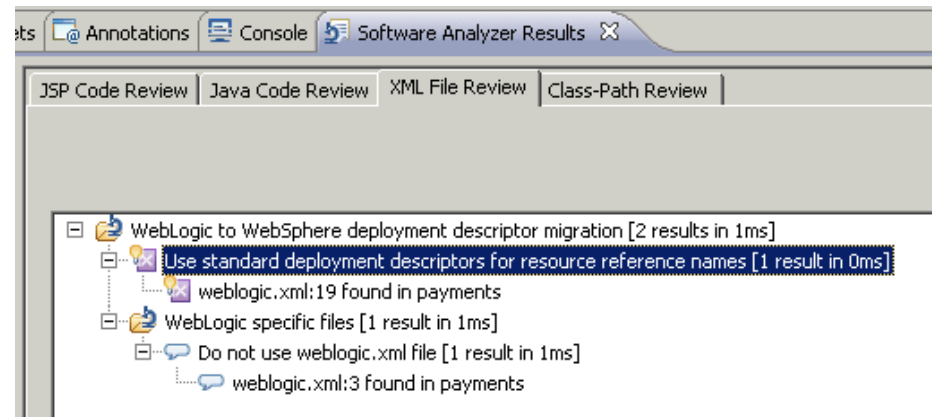


Migrating JEE Applications May Still Require Changes

- Developers often use vendor-specific code
 - ▶ Especially for older applications
- Application servers use different deployment techniques
 - ▶ Procedures
 - ▶ Application meta-data
- Code being migrated is often out of date
 - ▶ May use older JEE versions

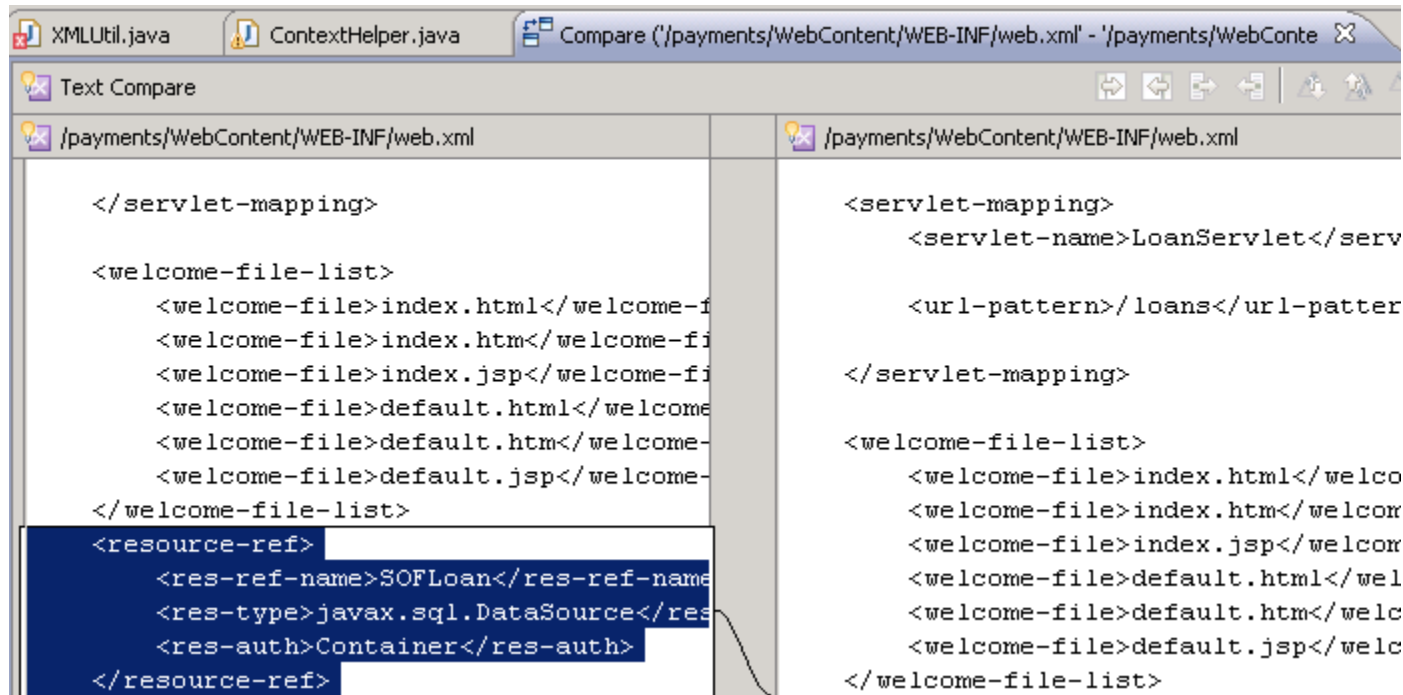
WebSphere Migration Toolkit Makes Migrations Easy

- Migrate from WebLogic Server or JBOSS to WebSphere Application Server V7.0
 - ▶ Analyzes application
 - ▶ Finds common problems
 - ▶ Fixes the problems for you (or tells you how)
- Reduces migration time
 - ▶ Saves up to 70% of the time spent migrating applications
- Free of charge
 - ▶ Support is available through normal channels



<http://www.ibm.com/developerworks/websphere/downloads/migtoolkit/>

DEMO: Migrating A Oracle WebLogic JEE Application To WebSphere Application Server



```
XMLUtil.java ContextHelper.java Compare ('/payments/WebContent/WEB-INF/web.xml' - '/payments/WebConte X
Text Compare
/payments/WebContent/WEB-INF/web.xml /payments/WebContent/WEB-INF/web.xml
</servlet-mapping>
<welcome-file-list>
  <welcome-file>index.html</welcome-f
  <welcome-file>index.htm</welcome-fi
  <welcome-file>index.jsp</welcome-fi
  <welcome-file>default.html</welcome
  <welcome-file>default.htm</welcome-
  <welcome-file>default.jsp</welcome-
</welcome-file-list>
<resource-ref>
  <res-ref-name>SOFLoan</res-ref-name
  <res-type>javax.sql.DataSource</res
  <res-auth>Container</res-auth>
</resource-ref>
<servlet-mapping>
  <servlet-name>LoanServlet</serv
  <url-pattern>/loans</url-patter
</servlet-mapping>
<welcome-file-list>
  <welcome-file>index.html</welco
  <welcome-file>index.htm</welcor
  <welcome-file>index.jsp</welcor
  <welcome-file>default.html</wel
  <welcome-file>default.htm</welc
  <welcome-file>default.jsp</welc
</welcome-file-list>
```

- Import JEE application running on WebLogic Server on Solaris
- Analyze and fix problems
- Map resources and deploy to WebSphere Application Server

Workloads That You Can Migrate Yourself – Easy Migration Scenarios To Get You Started

- Migrate an application from Oracle WebLogic on Solaris to IBM WebSphere Application Server on Power Systems
 - ▶ IBM WebSphere Migration Toolkit
- Migrate an Oracle Database on Solaris to IBM DB2 on Power Systems
 - ▶ Oracle DB to IBM DB2
 - ▶ Use built-in IBM DB2 compatibility capabilities like PL/SQL procedures
- Migrate workloads from Oracle Solaris to IBM Power Linux
 - ▶ IBM Migration Kit for Solaris OS to Linux

It Is Simple And Easy To Migrate Oracle DB To IBM DB2 9.7

- Run Oracle workloads in DB2 9.7 without porting or rewriting code
 - ▶ Native compatibility with 90 to 99% of Oracle specific statements

Oracle	→	DB2
Oracle Concurrency Control	→	Native support
Oracle SQL	→	Native support
Oracle PL/SQL	→	Native support
Oracle Data Types	→	Native support
Oracle Functions and Built-in packages	→	Native support
JDBC	→	Native support
SQL*Plus Scripts	→	Native support

Let's Start: Migrate Oracle Data To DB2

- **Not all databases are create equal**

- ▶ Different standards levels
- ▶ Differences in ANSI compliance, differences in implementations
- ▶ Proprietary source extensions, data types and type semantics
- ▶ Syntax Procedural language, built-in functions

- **IBM Data Movement Tool** (Free download from IBM)

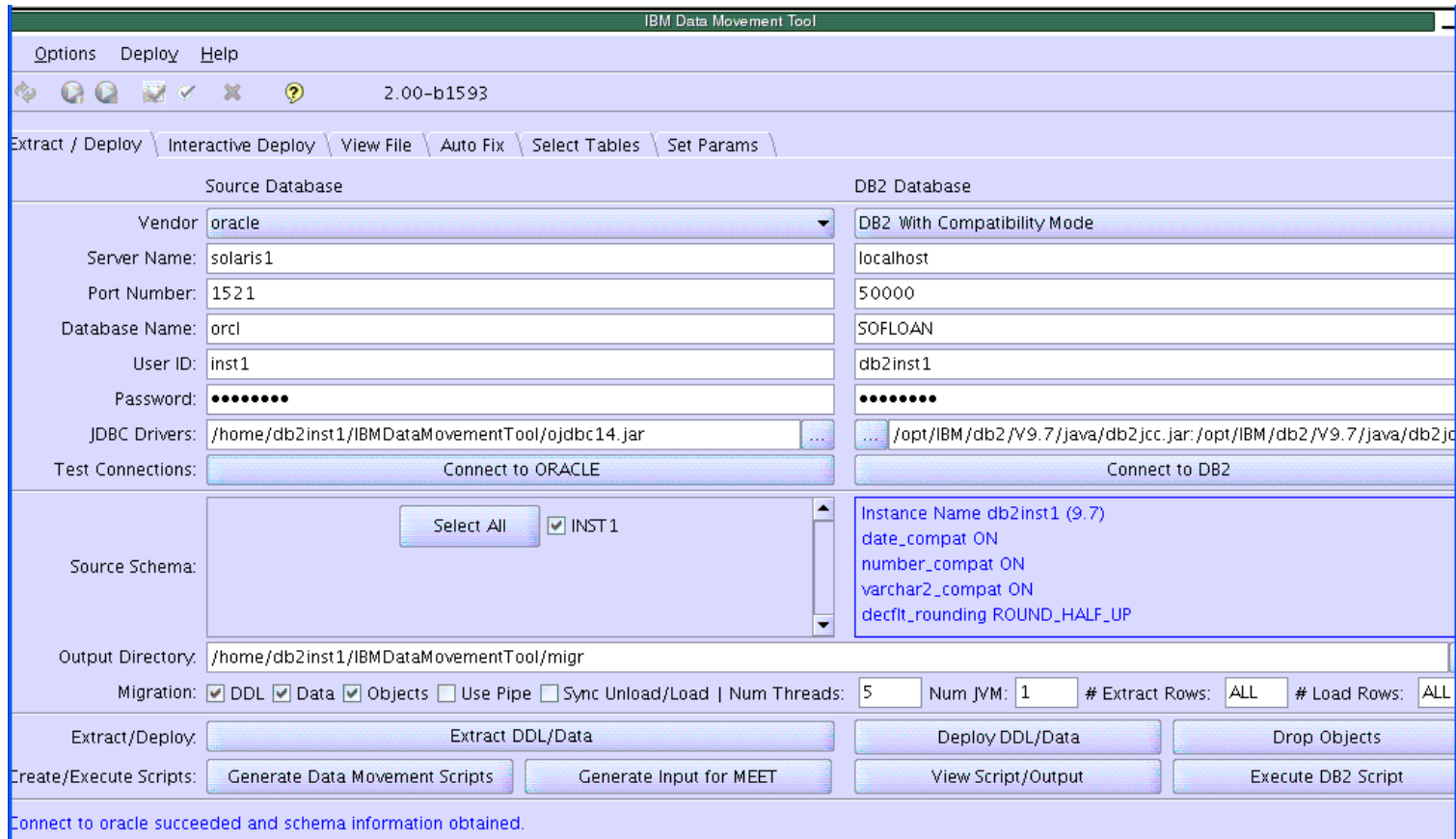
- ▶ <http://www.ibm.com/developerworks/data/library/techarticle/dm-0906datamovement/>
- ▶ Can help you connect and migrate data from ANY database that has a **type-IV JDBC driver**
 - DB2, Oracle, Microsoft SQL Server, Sybase, MySQL, Ingres, PostgreSQL

- **Red Book: “Oracle to DB2 Conversion Guide for Linux, UNIX, and Windows”**
 - **SG24-7048-01**

<http://www.ibm.com/developerworks/data/library/techarticle/0209jarzebowicz/0209jarzebowicz.html>

<http://www.ibm.com/developerworks/data/library/techarticle/dm-0906datamovement/>

DEMO: Migrate Oracle DB Data And Run Oracle PL/SQL Natively In DB2 9.7



- Migrate data from Oracle to DB2
- Migrate PL/SQL stored procedures from Oracle to DB2
- Change web application to use DB2 instead of Oracle

Workloads That You Can Migrate Yourself – Easy Migration Scenarios To Get You Started

- Migrate an application from Oracle WebLogic on Solaris to IBM WebSphere Application Server on Power Systems
 - ▶ IBM WebSphere Migration Toolkit

- Migrate an Oracle Database on Solaris to IBM DB2 on Power Systems
 - ▶ Oracle DB to IBM DB2
 - ▶ Use built-in IBM DB2 compatibility capabilities like PL/SQL procedures

- Migrate workloads from Oracle Solaris to IBM Power Linux
 - ▶ IBM Migration Kit for Solaris OS to Linux
 - <http://www.ibm.com/developerworks/systems/library/es-portsolaris/>
 - <http://www.ibm.com/developerworks/ondemand/migrate/linux.html>

Red Book: Solaris to Linux Migration: A Guide for System Administrators, SG24-7186

Solaris And Linux Share A UNIX Heritage

- Porting from Solaris to Linux is generally easy
 - Administration and development tasks are quite similar
 - Migration may be as simple a recompiling with gcc / options
 - Differences may exist
 - ▶ Overall architecture
 - ▶ Memory maps
 - ▶ Different threading models
 - ▶ System Administration
-

Solaris to AIX Migration:

Red Book: Sun Solaris to IBM AIX Migration: A Guide for System Administrators - SG24-7245-00

Break Free **Complimentary** Migration Offer

- Achieve Up to 50% in Saving¹ - TCO over a 3-year period
- Complimentary Oracle to DB2 and WAS Migration services²
 - ▶ A set of bundled migration services to perform software migration to the Power7 Server platform
 - ▶ A bundled DB2 and WAS education package
 - ▶ Training course for Oracle DBAs and Weblogic Administrators
 - ▶ An IBM Software overview session
- For more information, contact your IBM sales rep or visit:
www.ibm.com/breakfree



1 Savings dependent on customer's current Power technology, projected customer savings calculated in 2010 by IBM TCO analysis

2 WebSphere Application Server and other software may be eligible.

IF You Need Help, IBM Migration Factory Has It All

- A funded assessment process to help understand the size, scope, risk, effort, and cost of a migration project
- Migrations for custom-coded applications, databases and some packaged ISV applications, in legacy and UNIX environments
- In-depth skills for moving Solaris, HP-UX, and other UNIX database and application servers to IBM solutions
- 25 years of experience, the people, tools and a proven process that is enhanced by IBM Global Resources
- Seamless integration with other IBM groups

<http://www.ibm.com/systems/migratetoibm/factory/>



Additional Detailed Migration Resources

- **WebSphere Migration Toolkit**
 - ▶ <http://www.ibm.com/developerworks/websphere/downloads/migtoolkit/>
- **DB2 Migration Toolkit and Data Movement Tool**
 - ▶ <http://www.ibm.com/developerworks/data/library/techarticle/0209jarzebowicz/0209jarzebowicz.html>
 - ▶ <http://www.ibm.com/developerworks/data/library/techarticle/dm-0906datamovement/>
- **DB2 Migration Team**
 - ▶ <http://www-01.ibm.com/software/data/db2/migration/dbmigteam.html>
- **Prolifics – WebLogic to WebSphere Migration Services**
 - ▶ <http://www.prolifics.com/weblogic-migrations-to-websphere.htm>
- **Redbook – Migrating WebLogic Applications to WebSphere V6**
 - ▶ <http://www.redbooks.ibm.com/abstracts/sg246690.html?Open>
- **IBM Migrate From Oracle/Sun, HP Programs**
 - ▶ <http://www.ibm.com/systems/migratetoibm/sun/>
 - ▶ <http://www.ibm.com/systems/migratetoibm/hp/>



THANK YOU!

For Coming Today

- Copies of the presentations
 - ▶ <http://www.ibm.com/developerworks/offers/techbriefings/details/power.html>

- Additional information on IBM Power Systems
 - ▶ <http://www.ibm.com/systems/power/>

- Additional information on IBM Software
 - ▶ <http://www.ibm.com/software/>