“Two for the Price of One”
Application Upgrade and Platform Migration
(DB2/UDB → Oracle)

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Introduction

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Agenda

- Introduction
- Project Overview
- Business Drivers
- Project Timeline
- Project Game Plan
- Platform Conversion Mechanics
- Issues Encountered
- Upcoming Projects
- Questions & Answers
Florida State University

• Tallahassee, FL - 1851
• Current enrollment 39,136

• National High Magnetic Field Laboratory
• Birthplace of Anti-Cancer Drug Taxol
Directives

- Application upgrade from PeopleSoft Financials 8.9 Maintenance Pack 5 to 9.0 Maintenance Pack 5
- Convert the underlying application database platform from DB2/UDB version 8.2 to Oracle 10.2.0.4

Constraints

- Must occur within a 6 month time window to avoid collisions with fiscal year end close (June) and calendar year end close for HR (December).
- Limited budget to bring in external resources to assist with the project
- Must use existing equipment to complete the project.
Business Drivers for the Project

On the application side:
• Take advantage of delivered enhancements in the 9.0 release, specifically in Accounts Payable and Purchasing
• Unending desire to stay “pseudo” current on maintenance

On the database side:
• Previously established fiscally attractive Oracle licensing agreement
• Strategic initiative within the central technology organization to consolidate relational database platforms.
• Shh…. I like Oracle better!
- Initial Upgrade Pass: 9/15 – 12/5
- Test Move #1: 1/5 – 1/23
- Test Move #2: 2/2 – 2/13
- Test Move #3: 2/23 – 2/27
- Go-Live: 4/6
Project Game Plan

- Conduct Application upgrade on the DB2/UDB platform
  - Conservative Approach
- Conduct platform migration after the upgrade is fully complete
  - 9.0 DB2/UDB → 9.0 Oracle
- What was our platform conversion tool of choice…?
  - PeopleSoft Datamover of course
Platform Conversion Mechanics

- Run as much in parallel as possible
- Custom SQR to build Datamover scripts
  - 40 export scripts
  - 10 shell scripts to run exports in parallel across 3 physical servers
- Custom Datamover scripts focused on application level data only (non-Tools tables)
- Exports complete in about 5 hours
- Taking care of the “Tools” related data
  - Run PeopleTools export script (mvprdexp.dms)
  - Run PeopleTools import script (mvprdimp.dms)
  - Run DDLORA.dms script
  - Drop all views and indexes
  - Create and build the Initial Audit Project
- Imports complete in about 6 hours
  - Used “replace_data *” instead of “import *”
  - 40 import scripts/10 shell scripts/3 physical servers
Platform Conversion Mechanics

• “Wrap up” upgrade process on Oracle database platform
  • Run create index and create trigger scripts
  • Run createvw.dms script
  • Execute RUNSTATS on database tables/indexes
  • Configure the upgrade environment
    – Online configurations/FSU customizations
    – Security migration
    – Post-upgrade SQL’s
    – Migrate any projects that were created after the “freeze”
Issues Encountered

• Database Object Sizing
  – Difficult to predict sizing
    • DB2 360 GB
    • Oracle 164 GB

• Performance of the data mover scripts
  – Carefully order run of export/import scripts to avoid concentration in one tablespace.
  – Use “replace data *” instead of “import *”
Issues Encountered

• Database syntax nuances
  – Some developers unfamiliar with Oracle
  – SYSDATE vs. CURRENT_DATE
  – Date math
  – Use meta-SQL functions!!!

• Re-tooling DBA team for Oracle

• Duplicating the infrastructure to get realistic timings
What’s Next for FSU?

- Platform migration for our 9.0 HCM application
  - DB2/UDB → Oracle
- Implementation of Oracle RAC
- Expansion of our DataGuard Implementation
  - Intelligent Log Shipping
- Enterprise Identity Management
- Structured Integration using SOA (ESB/BPEL)
THANK YOU!

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