CON9055: Advanced Management of Oracle PeopleSoft with Oracle Enterprise Manager

Milten Garia – California State University
Greg Kelly – PeopleTools Strategy
Gregory Bouras – Oracle Sales Consulting
Safe Harbor Statement

The following is intended to outline our general product direction. It is intended for information purposes only, and may not be incorporated into any contract. It is not a commitment to deliver any material, code, or functionality, and should not be relied upon in making purchasing decisions. The development, release, and timing of any features or functionality described for Oracle’s products remains at the sole discretion of Oracle.
Program Agenda

- Introduction
- Strategy
- Application Management
- Value Proposition
- AMS for PeopleSoft Roadmap
- California State University
- Conclusion Discussion and Q&A
Introduction
Customer Challenges
Fragmented IT Management

- Management as an afterthought
- Many disparate/bolt-on tools
- Many skill sets
- Monitoring data overload
- Finger pointing
- No automated resolution
- No business visibility
Integrated Application-to-Disk Management

Customer Benefits

- Single source of truth
- Uniformity and standardization
- Shorter deployment times
- Easier to manage and upgrade
- Lower cost of ownership
- Reduced change management risk
- Improved support experience
Strategy
Application Management Strategy

EM Framework & Plug-ins + Application Content

- Manage the Application as a single entity. “Applications Management” changes the conversation from horizontal to vertical solutions
- Provide complimentary, not competitive, functionality for individual Apps.
- Leverage, capitalize, and reuse native Apps functionality.
- Provide connectivity between the different technology components (e.g., end-to-end management story)
Application Management Strategy

**EM Solution Areas**

- My Oracle Support
- EM Support Workbench
- EM Healthchecks
- Oracle Solution Architects
- User Productivity Kit
- User Adoption Services
- Education

- Oracle Solution Architects
- Personalizations
- BI Publisher
- Oracle Development Standards
- Oracle CEMLIs

- Real Application Testing
- Application Testing Suite
- Data Masking (PSFT Roadmap)
- Test Data Management

**Application Management Suite (All)**

**Application Management Suite (All)**

**Application Management Suite (E-Business Suite Only)**

**Application Management Suite (All)**
Application Management Strategy

Common and Unique Capabilities

**Common Features**

- Target Discovery & Organization
- Performance/Component Drill Down
- Monitoring/Metrics/Alerting
- Centralized Console & Repository
- Automation of Manual Steps
- Historical Reporting
- Role & Access Control
- Integration with Other EM Products

**Unique to SEBL**

- Integration with HI/SI Framework
- SARM Integration & Reporting
- Workflow Process Monitoring
- Centralized Log Access

**Unique to PSFT**

- App Server Admin
- Process Sched. Admin
- Centralized Log Access

**Unique to EBS**

- Concurrent Processing Dashboard
- End-to-End Monitoring
- JVM Monitoring
- Customization Management
- Automated Patch Management
- Configuration/Setup Data Management
- Automated Cloning

**Unique to JDE**

- Server Manager Integ.
Application Management Strategy

**Common and Specific Capabilities**

**Common Features**

- Target Discovery & Organization
- Performance/Component Drill Down
- Monitoring/Metrics/Alerting
- Centralized Console & Repository
- Automation of Manual Steps
- Historical Reporting
- Role & Access Control
- Integration with Other EM Products

**PeopleSoft**

- App Server Admin
- Process Sched. Admin
- Centralized Log Access
- Support for Platforms
Application Management Strategy

PeopleSoft Capabilities

User Experience Management
- Service Level Objective
- Real User Monitoring
- Synthetic User Monitoring
- Service Test
- Key Performance Indicator
- Performance Metrics
- Usage Metrics
- Service Dashboard
- Service Level Reports

System Monitoring and Diagnostics
- Thresholds
- Alert Notifications
- Metric History
- Extensive Log Analysis
- Process Scheduler Management

Configuration Management
- Discovery
- System Modeling
- Service Modeling
- Configuration Snapshot
- Change Audit Trail
- Configuration Compare
- Configuration Policy

Lifecycle Automation
- Domain Administration
- Job System
- My Oracle Support Integration

Additional Oracle Enterprise Manager products to augment Application Management Suite for PeopleSoft:
- Application Testing Suite
- Real Application Testing
- Data Masking Pack
- Test Data Management
- Diagnostic Pack for Database
- Tuning Pack for Database
- Configuration Management Pack for Database
- System Monitoring Plug-in for Non-Oracle Databases
- System Monitoring Plug-in for Storage
Application Management Strategy

Tangible, Positive Return on Investment

- Establish consistency and uniformity
  - Replaces proprietary/manual tools and procedures
  - Standardized environment for enduring custom scripts
- Centralize on a common toolset, repository, and console
- Enable proactive management via Alerts, Notifications, and Automated Corrective Actions
- Better visibility and efficiency across all individual, yet related, components
- Dashboards – out-of-the-box and custom / ad-hoc and historical (BI Publisher)
Application Management
Complete Application Management

End User Management

System Management

Application Management Suites

Configuration Management
System Management

**Goal: Recognition and Organization of Application Targets**

- Numerous individual targets per Product per instance. More targets depending on complexity.
- Leverage the system and services concepts in EM - a logical way to group related components.
- Can be managed, monitored, or reported on like any other Target.
System Management
Goal: Centralized Access and Management

From single point
- Troubled component clearly identified
- Troubled component restarted
- Server details
- Memory and CPU utilization
- Enabled features
Monitor performance from an end-user perspective using:

- Web Transactions
- SOAP Tests

Include Service Tests for:

- Simple Login Tests
- Transactions that resemble critical paths taken by end-user
- SOAP Transactions for associate web services
System Management

Service Level Management

• Define operational level objectives
  • Gather business requirements
  • Agree to expected service levels
  • Model end-to-end services
• Centralize management of SLA’s to gain enterprise-wide view of IT performance
• Dashboards and reports summarize KPI’s and service levels achieved
- Centralized system management
- Set up alerts when thresholds have been reached
- Leverage out of the box PSFT specific metrics and policies as well as host alerts (i.e. file system space)
- Review performance data to identify issues or anomalies
- Access Tuxedo Command Line
- Purge/Archive Cache
- Clean IPC Resources
System Management

Log File Management

- Let Enterprise Manager manage the archiving and purging of your log files
- Set up log file alerts
- Log files can be scanned for desired patterns or error codes
- Reduce on-disk footprint
- Log directories remain manageable
- Ability to Archive log files
Value Proposition for PeopleSoft Customers

- Resource Investment
- Disparate Administration
- Business Continuance
- Advanced Indication of Issues
  - Alerts
  - Log File Analysis
**AMS for PeopleSoft Roadmap**

**Supported PeopleSoft Releases**

- **Supported releases**

<table>
<thead>
<tr>
<th>PSFT Release</th>
<th>Supported PeopleTools Versions</th>
<th>Certified EM Release</th>
</tr>
</thead>
<tbody>
<tr>
<td>8.50</td>
<td>8.48– 8.50</td>
<td>EM 10g R5</td>
</tr>
<tr>
<td>8.51</td>
<td>8.48– 8.50</td>
<td>EM 11g R1</td>
</tr>
<tr>
<td>8.52</td>
<td>8.50 – 8.52</td>
<td>EM 11g R1</td>
</tr>
<tr>
<td>8.53*</td>
<td>8.51-8.53</td>
<td>EM 12c</td>
</tr>
</tbody>
</table>

* Planned CY12

---

**Supported releases**

- **PS FSCM/PT 8.51**
- **PS HCM/PT 8.50**
- **PS CRM/PT 8.52**

**Enterprise Manager**
AMS for PeopleSoft Roadmap

Investment Strategy

- Enhance current solutions
- Deepen integration with RUEI
- Continued adoption of base Enterprise Manager capabilities
  (e.g. Supportability Workbench, MOS integration, Health Checks, Incident Manager, etc.)
California State University (CSU)

Milten Garia

– Milten has worked for California State University, Chancellor’s office and California State University Northridge for 10 years providing system-wide Development and Infrastructure support for 23 campuses.
CSU Agenda

- Introduction
- Background
- Environment
- Requirements
- Project Status
- Challenges
- Discovery
- Lessons Learned
Located seaside in sunny Long Beach

Office of the Chancellor is the headquarters for the CSU 23-campus system.
California State University

- 427,000 students
- 44,000 faculty and staff
- 82,000 graduates a year
- 2 million alumni
- The largest, most diverse, and one of the most affordable university systems in the country
- 23 campuses, 7 off-campus centers and the Chancellor’s Office
- CSU Long Beach and San Diego nationally in top 10 in Received Applications (>45,000 per campus)
Notable Alumni & Former Students

- Steven Spielberg & Tom Hanks – Dynamic Duo
- Hilda Solis – Secretary of Labor
- Misty-May Treanor – Gold Medalist
- Kevin Costner – Actor and a decent Baseball Player
- Cheech – Better half of Chong
- Billie Jean King – Tennis Royalty
- Sol Price – Founder of Costco – “If you can’t find it in Costco, then you don’t need it”
- “Weird Al” Yankovic – “Eat It” and 150 more like it
- Robert Peterson – Founder of Jack In the Box (and Secret Sauce)
- Stephen Hillenberg – Executive Producer, SPONGEBOB
- Larry Twersky – President, 1-800-DENTIST
- Charles Noski – CFO of Bank of America
- Peter Oppenheimer – CFO of Apple
- Teri Garr, Debra Winger, Eva Mendes, Paula Abdul
- Greg Bouras and yours truly
California State University

Background
CSU and Oracle

- 24 Campuses live with HR 9.0, PeopleTools 8.51.08
  - 300+ individual production and development PeopleSoft instances
- 1 single Common Financial System (CFS) for all 24 campuses, Finance 8.9, PeopleTools 8.48.16
- RDBMS – Oracle 10G. Plans to migrate to 11G in 2012-2013
- Unix Solaris 10 Environment
- OEM 11G
CSU Service Model & Responsibilities

- **Campuses**
  - Campus Support
  - CMS Level 1 Help Desk
  - Oracle DB Administration Support
  - Oracle Performance Management
  - Portal / Data Warehouse / Other Campus Apps
  - CMS Network Support (w/CENIC)
  - 3rd Party Tools
    - PeopleSoft Technical Support
    - PeopleSoft Performance Management
    - PeopleSoft Installation / Maintenance
    - Security Management

- **CMS Central**

- **Vendor**
  - HW Acquisition / Ownership / Refresh
  - HW Installation / Maintenance / Support
  - OS Installation / Maintenance / Support
  - Backup / Recovery / Disaster Management
  - Data Center Level 2 Help Desk
  - Oracle SW Physical Support
Enterprise Roles

- Unisys (Vendor)
  - Installation
  - Administration
  - Developer

- Common Management System (CMS)
  - Administrator
  - Oversight

- Individual Campus
  - User
California State University

Environment
CSU/Unisys ERP Data Center Services
Environment

- **Database** – SUN M5000s, 128G memory running 19 Virtual Containers in 10 Solaris Zones (ZFS)
- **Application** – SUN M5000s 256G memory running 27 Virtual Containers 10 Solaris Zones (ZFS)
- **Web** – 15 Windows 2008 servers, 94 production and over 200 development PIA instances
- **Infrastructure** – All servers are T4s 256G memory running Solaris 10 virtual containers
Application Domain Structure

- Application domains owned, managed and secured by dedicated application ‘a’ and process scheduler ‘p’ accounts

- Provides discernible distinction between user accounts to manage BBLs and server processes

```
hlbprdp 25698 1648 Jul_19 ?  01:23 BBL -C dom=PSUNX_37397 -g 30002 -i 0 -u csslu650 -U /hr/hlbprd/appserv/prcs/hlb
hlbprda 3960 1648 Jul_19 ?  04:52 BBL -C dom=hlbprdaA_47529 -g 30002 -i 0 -u csslu650 -U /hr/hlbprd/appserv/hlbprd
```

- Performance Management (top/prstat)

```
<table>
<thead>
<tr>
<th>PID</th>
<th>USERNAME</th>
<th>SIZE</th>
<th>RSS</th>
<th>STATE</th>
<th>PRI</th>
<th>NICE</th>
<th>TIME</th>
<th>CPU</th>
<th>PROCESS/NLWP</th>
</tr>
</thead>
<tbody>
<tr>
<td>15252</td>
<td>hlbprdp</td>
<td>368M</td>
<td>256M</td>
<td>sleep</td>
<td>51</td>
<td>0</td>
<td>0:02:23</td>
<td>0.0%</td>
<td>PSDSTSRV/48</td>
</tr>
<tr>
<td>17660</td>
<td>hlbprdp</td>
<td>364M</td>
<td>248M</td>
<td>sleep</td>
<td>51</td>
<td>0</td>
<td>0:02:19</td>
<td>0.0%</td>
<td>PSDSTSRV/48</td>
</tr>
<tr>
<td>25757</td>
<td>hlbprdp</td>
<td>336M</td>
<td>165M</td>
<td>sleep</td>
<td>1</td>
<td>0</td>
<td>0:20:05</td>
<td>0.0%</td>
<td>PSMSTPRC/47</td>
</tr>
<tr>
<td>2737</td>
<td>hlbprdp</td>
<td>323M</td>
<td>154M</td>
<td>sleep</td>
<td>57</td>
<td>0</td>
<td>0:00:22</td>
<td>0.0%</td>
<td>PSMONITORSRV/47</td>
</tr>
<tr>
<td>26180</td>
<td>hlbprdp</td>
<td>134M</td>
<td>112M</td>
<td>sleep</td>
<td>59</td>
<td>0</td>
<td>0:22:13</td>
<td>0.0%</td>
<td>PSPRCSRV/1</td>
</tr>
<tr>
<td>25698</td>
<td>hlbprdp</td>
<td>10M</td>
<td>7776K</td>
<td>sleep</td>
<td>59</td>
<td>0</td>
<td>0:01:23</td>
<td>0.0%</td>
<td>BBL/1</td>
</tr>
</tbody>
</table>
```
Security – User Access Control

- Unix is an open source OS, vulnerable to security threats
- eTrust Access Control by Computer Associates
- eTrust Access Control for UNIX
  - Simplifies User Administration via Policy Model Database (PMDB)
  - Auditing – Logs every action and associates it with the user
  - Enables a finer granularity of permission control over directories and files
- Mechanism to allow campus users to manage their own defined set of processes
- “sesu” and “sesudo” are the eTrust replacement for the commonly used “su” and “sudo”
ps_admin script and sesudo

- "sesudo" operates on a per-command basis and provides the following features:
  - The ability to restrict what commands a user may run on a per-host basis.
- CSU Wrapper script (ps_admin) to execute psadmin utility.
  - Provides campuses ability to manage development domains.
  - Provides CMS staff ability to manage development, production and pre-production environments
    - sesudo ps_admin -d <sid> -o <stop/start/..>
California State University

Requirements
CSU and Unisys Requirements

- Manage the entire PeopleSoft Stack with one product
- Alerts
- Monitoring – Health and Performance
  - Application Servers
  - Web Servers
  - Unix and NT Process Schedulers
- Dashboards
- Sizing and Forecasting Reports and Requirements
- Unisys has additional extensibility responsibilities
Metrics

- # of Process queued for App Server
- # of Process queued for Pub/Sub (handlers and dispatchers)
- # of non-idle PSAPPSRVs
- Total Tuxedo Connections
- PSAPPSRV handler processing time – Average time for each PSAPPSRV to complete a transaction
- PS Application Server Client/Queue Server/Status
- # Queued Processes for Process Scheduler
- # Queued Processes for Distribution Server
- PS Process Monitor
- # of Active Threads on the PIA
- Number of Active Users/Sessions
- Number of Unique Visitors during a selected period
- Average Visit per user session
- Amount of Physical memory allocated and in-use for a PIA
- PIA Throughput
- PS PIA Availability
- PS Web Site Availability
Campus Requirements

- Monitoring Purposes Only
  - Physical Server Resources
  - Domain Performance
  - Log File Management
California State University
Project Status
Project Overview
September 2012

Phase I (complete)
- Made Test System Available (ZZ)
  - Work Through Issues
  - Development Deployment Model
- Test out full system discovery (Campus PRJ and TRN)

Phase II (complete)
- Pre-Production System Discovery

Phase III (in progress)
- Extend Metric and Security Model
- Roll Out to Campuses
California State University

Challenges
Environmental OS

- **PS_HOME user .profile changes**
  - umask (002)
  - Addition of new variable (ARG_PARAM)

- **Modification of CSU Korn Shell script (psenv)**
  - psenv: Consolidation of psconfig.sh, psdb.sh and pstuxenv.sh
  - Incorporate Bourne Shell

- **OEM Plugin Agent Discovery Variable**
  - /opt/oracle/psft/ps_login_vars.sh
Bourne and Korn

- psenv runs with Korn Shell
- OEM runs in context of Bourne Shell
- Most Korn is backward compatible with Bourne, but changes required to psenv:
  - Syntactical – “[[“ to “[“, “>= to –gt, Double Quotes around Variables
  - Export Commands
    - Korn (export PSTAB=`$ECHO $psenv_str|$CUT -d: -f3`)
    - Bourne (PSTAB=`$ECHO $psenv_str|$CUT -d: -f3`; export PSTAB)
Bourne and Korn (cont’d)

- OEM executes `psenv` within Bourne subshell `/usr/bin/sh`
  - “dot invocation” does not pass in positional parameters to execute shell scripts – in this case `psenv`
  - Use argument variables e.g.
    - `ORACLE_SID="$ARG_PARAM"` instead of `ORACLE_SID="$1"
      (shell scripts inherit environmental variables)
California State University

Discovery
Target Discovery

- Discovery Goals
  - Application server domains
  - Pub/Sub servers
  - Unix and NT Process Schedulers
  - PIA Web server instance; Online and Report Repository
Target Credentials

- Target Discovery via tuxedo account (‘a’ or ‘p’)
- Required for Administration Utilities
  - Domain, Tuxedo, Configuration Management
  - Execute Host Commands
  - Requires additional Security changes
    - Allow Surrogate Access to the ‘Oracle’ account to switch to the OS user account
## Target Discovery

<table>
<thead>
<tr>
<th>Target</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>HARPR1.pssystem.0563b00-e56a-11e1-a5e7-c9303a997b20</td>
<td>PeopleSoft System</td>
</tr>
<tr>
<td>HARPR1.db.0563b00-e56a-11e1-a5e7-c9303a997b20</td>
<td>PS Application Database</td>
</tr>
<tr>
<td>HARPR1.HDEV-85108.site.CSSLN573.d_csupsf.pt85108</td>
<td>PS Web Site</td>
</tr>
<tr>
<td>HARPR1.HDEVR-85108.site.CSSLN578.d_csupsf.pt85108</td>
<td>PS Web Site</td>
</tr>
<tr>
<td>HARDEV-85108.pia.CSSLN578.d_csupsf.pt85108</td>
<td>PS PIA</td>
</tr>
<tr>
<td>HCEVR-85108.pia.CSSLN578.d_csupsf.pt85108</td>
<td>PS Application Server Domain</td>
</tr>
<tr>
<td>hanprj6.app.csslu611.hr_hanprj</td>
<td>PS Web Site</td>
</tr>
<tr>
<td>HANPRJ1.HDEV-85108.site.CSSLN583.d_csupsf.pt85108</td>
<td>PS Process Scheduler Domain</td>
</tr>
<tr>
<td>hanprj.crlcsslu656.d_hr.pt85108</td>
<td></td>
</tr>
<tr>
<td>hanprj1.crlcsslu611.hr_hanprj</td>
<td></td>
</tr>
</tbody>
</table>
California State University

Lessons Learned
Lessons Learned

- Required Expertise and Resources
  - Unix/Linux/Windows Administration
  - DBA
  - PeopleSoft administration
  - Security
  - OEM Implementation Guide
Discovery Process Script

- Use “Execute Host Command” as the application owner account (‘a’/’p’) to ensure correct authentication/authorization

- Target discovery is conducted by:
  - The account which installs and administers the OEM Plugin (i.e. ‘oracle’) \(\rightarrow\) /opt/oracle/psft. This account will require application/process scheduler privileges to write to /data directory).
  - The discovery (‘oracle’) account performs a switch user command to the application domain account: ‘su <domain admin>’
  - Example
    - su hanrprja
    - su hanrprjp
Discovery Process Script (cont’d)

- The discovery process is conducted through a dynamically generated script.
- The content can be located in psemagent.trc when debug option is turned on.

```
LOGIN_SHELL = test -f $HOME/psft/ps_login_vars.sh &&
  . $HOME/psft/ps_login_vars.sh;
PATH=/opt/oracle/product/gcagent/agent11g/sysman/admin/scripts/
psem/loginshell:$PATH; export PATH; -sh -c ' cd /hr/hantrn/appserv; . ../toolsadmin.sh; echo XXX PS EM PLUGIN OUTPUT START XXX; PS_CFG_HOME=/hr/hantrn; export PS_CFG_HOME; /hr/hantrn/appserv/psadmin -v';
```
Discovery Process Script (cont’d)

- Validates the existence of the ps_login_vars.sh within /opt/oracle/psft directory (plug-in installer home directory)
  - Sets the $HOME path for the user account (domain owner) used for discovery
- Agent on target runs in context of plug-in installer account
- For discovery, agent does “su” to domain owner account note: without dash “-”
  - i.e. discovery account inherits context from agent account
- The custom “ps_login_vars.sh” here ensures discovery account has correct $HOME set

```
cssl611:/opt/oracle/psft> view ps_login_vars.sh
"ps_login_vars.sh" [Read only] 3 lines, 136 characters
LOCAL_LOGNAME=`whoami`; export LOCAL_LOGNAME

HOME="/hr/users/$LOCAL_LOGNAME"; export HOME
```

**WHY?**
Discovery Process Script (cont’d)
loginshell & Bourne Shell

- The plug-in instantiates a lesser known construct of calling “sh” by a
  “-”, as “-sh”. (known as “loginshell”)
  - The “-” invocation of “sh” forces the examination of .profile for HOME directory.

hanrtrn@csslu611:hanrtrn:/opt/oracle/product/gcagent/agentllg/sysman/admin/scripts/psem/loginshell> ls -ltar
lrwxrwxrwx 1 oracle dba 7 Jun 28 05:05 -sh -> /bin/sh

- Bourne Shell Constructs
  - Script requires the use of Bourne Shell like sh and bash
  - Passing of parameter as literals instead of Bind Variables (i.e.
    ORACLE_SID="$ARG_PARAM” instead of ORACLE_SID="$1”) in psenv

  (Bourne shell in Solaris 10 conforms strictly to POSIX standard)
Changes to .profile

```bash
#!/usr/hanrtn/.profile

#

cmsh 002
LOGNAME=`whoami`; export LOGNAME
EDITOR=vj; export EDITOR
stty erase ^H
PS1="\$(LOGNAME)@\`uname -n`:\$(ORACLE_SID):\$(PWD)> ": export PS1

if [ "$1" = "" ]
then
  APP_OSUSER=$LOGNAME; export APP_OSUSER
else
  APP_OSUSER=$1; export APP_OSUSER
fi

if [ "$APP_OSUSER" = "hanrtn" ] || [ "$APP_OSUSER" = "hanrtna" ] || [ "$APP_OSUSER" = "hanrtnp" ]
then
  ARC_PARAM=hanrtn; export ARC_PARAM
  /usr/hanrtn/psev.sh hanrtn
  #. /usr/local/bin/psev hanrtn
```

WHY?
PSADMIN

- Discovery Process makes use of psadmin
  - Agent Initiates “psadmin –v”: Strictly a validation checkpoint
  - psadmin requires access to $PS_CFG_HOME/data
  - Makes calls to tmadmin
  - To gather metrics (pq, server status)
  - psamdin requires Unix permissions to PS_CFG_HOME, if not exists it will use PS_HOME (both variables will point to same directory)
Other Variables

- toolsadmin.sh makes a call to psconfig.sh
- psconfig.sh
  - Sets PS_SERVDIR & PS_SERVDIR_CFG environment variables
  - If not being used, blank out the script
- .../lib32 considerations in Solaris
  - LD_LIBRARY_PATH and LD_LIBRARY_PATH_64

WHY?
Considerations for Web Servers and PSNT

- **$PS\_HOME Environment Variable**

- **Config.xml** – `<server-private-key-alias>` set to the PIA IP address; not server name

- **setEnv.cmd** – `ADMINSERVER\_HOSTNAME` set to the PIA IP address; not server name

- **singleserverStatus.cmd** (use T3 protocol call)
Considerations for Development Instances

Databases

The instance replication approach includes replicating the database

- Each instance must have unique GUID.
  - Shutdown domain
  - Blank out GUID i.e. `update PSOPTIONS set GUID = ''`; (this needs to take place for discovery in development),
  - Restart domain to repopulate the GUID

(NOTE: Application Server domain must be shutdown again for discovery, if the configuration parameters have to be edited)
Conclusion Discussion and Q&A
## PeopleTools Sessions of Interest

### Monday

<table>
<thead>
<tr>
<th>Time</th>
<th>Title</th>
<th>Session</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>10:45</td>
<td>Performance Tuning for the PeopleSoft Administrator</td>
<td>CON9210</td>
<td>MW - 3009</td>
</tr>
<tr>
<td>10:45</td>
<td>How the Power of PeopleSoft PeopleTools Can Empower Financial Operations</td>
<td>CON9097</td>
<td>Westin, Concordia</td>
</tr>
<tr>
<td>12:15</td>
<td>Art of the Possible: A Great User Experience via PSFT Applications Portal</td>
<td>CON9188</td>
<td>MW - 3009</td>
</tr>
<tr>
<td></td>
<td>Putting the PeopleSoft Test Framework to Work for You</td>
<td>CON9190</td>
<td>MW - 3011</td>
</tr>
<tr>
<td></td>
<td>Oracle Engineered Systems Success with PeopleSoft</td>
<td>CON9204</td>
<td>MW - 3008</td>
</tr>
<tr>
<td>4:45</td>
<td>PeopleSoft Technology Roadmap</td>
<td>CON9183</td>
<td>MW - 3002/4</td>
</tr>
</tbody>
</table>
### PeopleTools Sessions of Interest

#### Tuesday

<table>
<thead>
<tr>
<th>Time</th>
<th>Title</th>
<th>Session</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>10:15</td>
<td>PeopleTools Roadmap: Mobile Applications</td>
<td>CON9196</td>
<td>MW - 3009</td>
</tr>
<tr>
<td></td>
<td>Securing Your PeopleSoft Integration Infrastructure</td>
<td>CON9205</td>
<td>MW - 3011</td>
</tr>
<tr>
<td>11:45</td>
<td>Mastering the PeopleSoft Reporting Suite</td>
<td>CON9201</td>
<td>MW - 3011</td>
</tr>
<tr>
<td></td>
<td>Securing Your PeopleSoft Environment Today &amp; Preparing for Tomorrow</td>
<td>CON9202</td>
<td>MW - 3009</td>
</tr>
<tr>
<td></td>
<td>Using Virtualization to Manage TCO</td>
<td>CON9206</td>
<td>MW - 3007</td>
</tr>
<tr>
<td>1:15</td>
<td>Implementing a PSFT Maintenance Strategy with PSFT Update Manager</td>
<td>CON9192</td>
<td>MW - 3009</td>
</tr>
<tr>
<td>5:00</td>
<td>PeopleTools Developer: PeopleTools 8.53 in Action</td>
<td>CON9187</td>
<td>MW - 3009</td>
</tr>
<tr>
<td></td>
<td>New Functional PeopleTools Capabilities for the Line of Business User</td>
<td>CON8932</td>
<td>MW - 3007</td>
</tr>
<tr>
<td>Time</td>
<td>Title</td>
<td>Session</td>
<td>Location</td>
</tr>
<tr>
<td>-------</td>
<td>-----------------------------------------------------------------------</td>
<td>---------</td>
<td>------------</td>
</tr>
<tr>
<td>10:15</td>
<td>PeopleTools Roadmap: Integration Broker</td>
<td>CON9189</td>
<td>MW - 3009</td>
</tr>
<tr>
<td></td>
<td>Understanding PeopleSoft Maintenance Tools &amp; How They Fit Together</td>
<td>CON9193</td>
<td>MW - 3002/4</td>
</tr>
<tr>
<td>11:45</td>
<td>Taking Advantage of PeopleTools’ New Search Features</td>
<td>CON9208</td>
<td>MW - 3009</td>
</tr>
<tr>
<td>1:15</td>
<td>PeopleTools Developer: Tips &amp; Techniques</td>
<td>CON9185</td>
<td>MW - 3009</td>
</tr>
<tr>
<td></td>
<td>PeopleTools Roadmap: Platforms</td>
<td>CON9203</td>
<td>MW - 3011</td>
</tr>
<tr>
<td>3:30</td>
<td>Case Study: Delivering a Ground-Breaking User Interface with PeopleTools</td>
<td>CON9186</td>
<td>MW - 3009</td>
</tr>
<tr>
<td></td>
<td>PeopleTools 8.53 Experiences - Panel Discussion</td>
<td>CON9198</td>
<td>MW - 3007</td>
</tr>
<tr>
<td></td>
<td>PSFT Update Manager – Hands on Lab #1 (2.5 hours)</td>
<td>HOL10460</td>
<td>Marriott - Nob Hill A/B</td>
</tr>
<tr>
<td>5:00</td>
<td>PeopleTools Product Team Panel Discussion</td>
<td>CON9200</td>
<td>MW - 3009</td>
</tr>
</tbody>
</table>
# PeopleTools Sessions of Interest

**Thursday**

<table>
<thead>
<tr>
<th>Time</th>
<th>Title</th>
<th>Session</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>11:15</td>
<td>Using the Integration Network to Build, Test, &amp; Debug Your Integrations</td>
<td>CON9194</td>
<td>MW - 3009</td>
</tr>
<tr>
<td></td>
<td>PeopleTools Developer: A Guide to Properly Enhancing PSFT Applications</td>
<td>CON9197</td>
<td>MW - 3011</td>
</tr>
<tr>
<td></td>
<td>PeopleSoft Update Manager – Hands on Lab #2 (2.5 hours)</td>
<td>HOL10460</td>
<td>Marriott – Nob Hill A/B</td>
</tr>
<tr>
<td></td>
<td>Meet the PeopleSoft PeopleTools Experts</td>
<td>MTE9652</td>
<td>MW 2001A</td>
</tr>
<tr>
<td>12:45</td>
<td>Management of Oracle PeopleSoft with Oracle Enterprise Manager</td>
<td>CON9055</td>
<td>MW 3009</td>
</tr>
</tbody>
</table>
Hardware and Software Engineered to Work Together