Upgrade +1
Improving Your Security
During Your Upgrade to R12

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Speakers

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- Founder of ERP Risk Advisors / ERP Seminars and Oracle User Best Practices Board
- 14 years working with Oracle EBS as client and consultant
- Experience includes Big 4 audit, 6 years in CFO/Controller roles – both as auditor and auditee
- Author – *Oracle E-Business Suite Controls: Application Security Best Practices*

Stephen Kost
Integrigy Corporation

- CTO and Founder
- 16 years working with Oracle and 12 years focused on Oracle security
- DBA, Apps DBA, technical architect, IT security, ...
- Integrigy Consulting – Oracle EBS security assessments and services
- Integrigy AppSentry – Oracle EBS Security Assessment and Audit Tool
1. Why Do “Security” During the Upgrade
2. Improvements Upon 11i
3. R12 New Security Features
4. R12 Processes and Procedures
5. Q&A
Why Do “Security” During the Upgrade

R12 New Security Features

Improvements Upon 11i

R12 Processes and Procedures

Q&A
Why do “Security” during the upgrade?

1. **Functional, Technical, & Stress Testing**
   - Functional application testing
   - Performance and stress testing

2. **Technology Stack Upgrades**
   - New version = new security features
   - Reset of security patching – should be current at go-live

3. **Modifications to Customizations**
   - Some or many customizations must be upgraded
   - Ideal time to review development standards
Traditional R12 Upgrade Project

Evaluate | Plan | Test | Upgrade | Post-Upgrade

Security “Aware” R12 Upgrade Project

Goal: High security value, low project effort, major testing required, low project risk

Evaluate
- Security and compliance gap analysis
- Review new application and technology stack security features

Plan
- Functional and technical test new security features
- Performance test auditing enhancements

Test
- Improve security and compliance processes
- Develop new security features
- Customization security reviews

Upgrade
- Implement new security features
- Latest security patches
- Upgrade hardening task
- Security scan

Post-Upgrade
- Implement security process improvements
- Post upgrade security review
Security “Aware” R12 Upgrade Project

Goal: High security value, low project effort, major testing required, low project risk

Evaluate
- Identify previously unaddressed risks
- Review mitigation of upgrade risk
- Consider informal policies and procedures

Plan
- Test new security configurations, processes, and controls
- Integrate testing of new software

Test

Upgrade
- Rigorously monitor changes
- Migrate to role-based access control

Post-Upgrade
- Execute upgrade plan, including both automated and manual changes
- Train employees on new features and processes
- Formalize the informal
- Identify add’l software that can assist security
- Integrate security and controls improvements into upgrade plan
- Address new risks
Why Do “Security” During the Upgrade

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R12 New Security Features

R12 Processes and Procedures

Q&A
R12 New Features

- **MOAC** – reduce number of responsibilities
  - Restrictions on localizations

- **SLA** – ability to enter journal through subledgers

- **Definition Access Sets** – better secure various components throughout the GL

- **Data Access Sets** – better security within the chart of accounts (Inquiry, Balancing Segment Values)
Role Based Access Control (RBAC)

- RBAC is an ANSI standard for access control
- Allows for responsibilities to be assigned through roles
- Simplifies assigned of common responsibilities
- Role Inheritance and Role Categories
- See Metalink Note ID 290525.1
User Management (UMX)

- **New user registration**
  - Self request access with approvals and workflow

- **Enhanced Login Assistance**
  - Forgot Username
  - Forgot Password

- **Process to create users with strong, one-time passwords**

- **New security wizards**
Proxy User

- Proxy User allows a user to specify a proxy who can act on their behalf.
  - For example, an executive can designate an assistant as a proxy, allowing that assistant to
  - Create, edit or approve transactions on behalf of that executive

- Generally, avoid use due to auditing issues

- Can be used to solve the concurrent request scheduling problem
Protecting Database Accounts

- Lock Database Schema Accounts (GL, FA, AP, etc.)
  - Use AFPASSWD rather than FNDCPASS
  - **Lock Products Schema Accounts**
    > AFPASSWD -L TRUE
  - Improved separation of duties
  - *See R12 SAG – Configuration*

- **Oracle 11g case sensitive passwords (12.1 only)**
  - SEC_CASE_SENSITIVE_LOGON = TRUE
  - APPLSYSYPUB must always be uppercase

- **Change the APPLSYSYPUB password**
  - Finally works in R12 and supported by Oracle
  - Also make sure the password is changed in AutoConfig
PCI PA-DSS

- **Oracle PA-DSS Consolidated Patch for Release 12.1**
  - Reduces complexity of PCI DSS compliance
  - Fixes multiple functional weaknesses when processing and viewing credit card data
  - Does not eliminate significant manual configuration for PCI DSS
  - Only 12.1 is PA-DSS compliant
  - See Metalink Note ID 984283.1

- **11i and 12.0 will not be PA-DSS compliant**
  - See Metalink Note ID 1101213.1
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Consider new software:
- SOD software
- Trigger or log-based technologies to develop detailed audit trails (before/after values)
- External security analysis
- Allow for monitoring of SQL forms, configurations related to key controls, development objects – better QA over your Change Management process
Fix What Was Broken

- Privileged user access
- Excessive access to configurations by end users
- Access to transactions by IT personnel
- Usage of generic or vendor supplier user accounts
- Not monitoring activity through SQL forms
Application Security Design

- Move toward use more customized responsibilities, if not all custom responsibilities
- Move toward use of all custom top-level menus and more custom sub-menus – such as those related to setups – reduce upgrade risks
- Take into consideration sensitive data
- Better definition of Request Groups
Why Do “Security” During the Upgrade

R12 New Security Features

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Q&A
Change Management

- **Formalize processes related to:**
  - Configuration Change Management
  - Patch Change Management
  - Application Security Change Management
  - Database Security Change Management

- **Implement a more robust Quality Assurance process related to Change Management**
  - Reduce unapproved changes
  - Protect integrity of system
Improve Controls

- **Identify additional risks such as:**
  - Operational risks specific to your organization
  - Fraud risks
  - Data security

- **Automate controls:**
  - Seeded workflows – build/changes processes to accommodate; Personalizations; Alerts

- **Document compliance with published Best Practices**
R12 Upgrade Controls Recommendations

- Process and Controls Change Committee
- Automate controls, where possible
- Evaluate ‘key’ controls to reduce audit scope, cost
- Implement technology and processes to better monitor / automate controls
- Document formal risk assessment process for application security risks
- Develop process to assess and document results of risk assessment – all risks
R12 Upgrade Security Recommendations

- Include security tasks throughout the upgrade project
  - Implement high value, low effort security improvements and enhancements
  - Leverage the “free” testing cycles

- Adhere to the Oracle Best Practices for Oracle EBS security
  - See Metalink Note ID 403537.1
  - Written by Integrigy
  - Oracle has not updated since 2007

- Validate the security configuration post-upgrade
  - Perform a post-upgrade security scan or review
  - Validate compliance against security best practices
  - Oracle E-Business Suite is complex and “the devil is in the details”
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