Oracle E-Business Suite Release 11*i* Security

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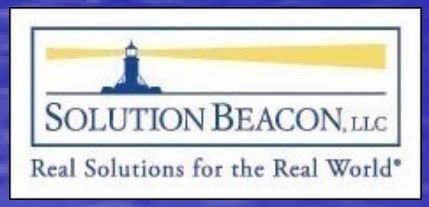
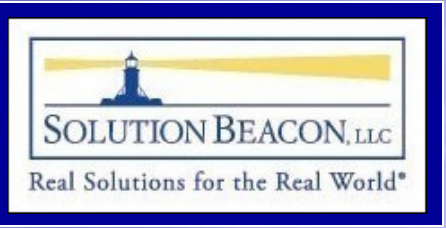


Welcome



- Today's Agenda:
  - OAUG Membership Benefits
  - Presenter Introductions
  - Presentation Overview
  - 30 Minute Release 11*i* Security
  - Minute 31 – Your Next Steps
  - Questions and Answers

Are you an OAUG Member?

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- **Knowledge** that showcases the latest trends and techniques used by industry leaders through our national and regional events and our publications, such as OAUG Insight magazine
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ROAD TO Las Vegas

Release 11*i* Security

Keeping The Bad (and Badder) Guys Away

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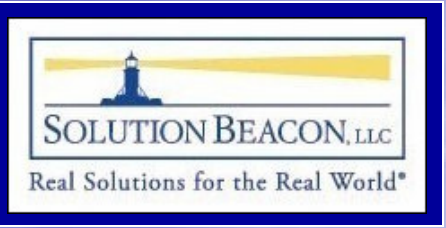
Presenter – Randy Giefer



- 20+ years of IT experience
  - Databases and Applications
  - 10 years Oracle Apps DBA
  - Fortune 1-1000
  - Government
- Founder of Solution Beacon, LLC
- Security Practice
- Email: rgiefer@solutionbeacon.com

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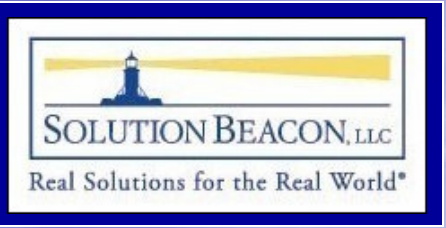
Presentation Overview



- ½ Awareness
- ½ Real World Best Practices

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30 Minute Release 11*i* Security "Keeping The Bad People Away"

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- Case Studies
  - Disgruntled Worldcom employee posts stolen names, SSN, birth dates of company executives on public website
  - Ex-Employee Steals CRM and Financials Data and Provides to Competitor

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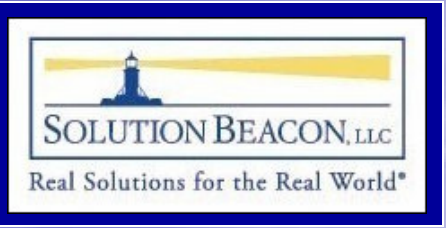
30 Minute Release 11*i* Security "Keeping The Bad People Away"



- Case Studies
  - Employee Sells Credit History Database
  - Employee Manipulates Payroll Data
  - AOL Employee Sells Email Addresses to Spammer
  - Laptops With Sensitive VA Data Stolen

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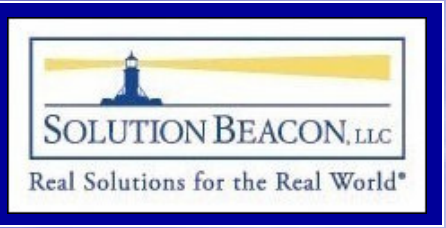
30 Minute Release 11*i* Security "Keeping The Bad People Away"



- Q. What do all of these Case Studies have in common?
  - Disgruntled Employee
  - Ex-Employee Steals CRM and Financials Data
  - Employee Sells Credit History Database
  - Employee Manipulates Payroll Data
  - Employee Sells Email Addresses to Spammer
  - Laptop With Sensitive VA Data Stolen
- A. A firewall didn't help!!!

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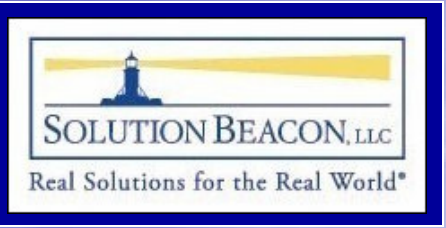
What Is Security?



- What do you think of when someone mentions “security”?
  - Physical Security
    - Three Gs (Guards, Gates, Gizmos)
  - Technology Stack Security
    - Network (e.g. Firewalls, Proxy Servers)
    - Server (e.g. Antivirus)
    - Database (Auditing?)
    - Application (Access Lists?)

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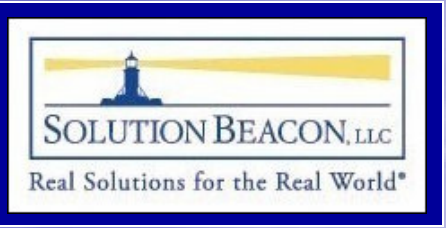
What Is Security?



- Most often, Security is focused on trying to keep the *external* bad people out …
- But who is keeping out the *internal* bad people?

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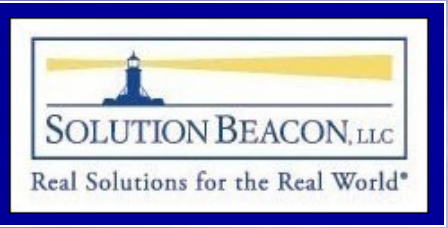
Today's Message

- The Internal Threats Are Real!

Fact: Internal Threats Are Real



Despite most people's fears that hackers will break into the company and destroy data or steal critical information, *more often than not, security breaches come from the inside*.

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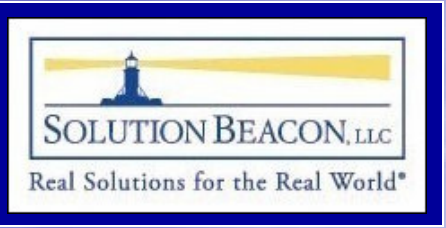
Fact: Internal Threats Are Real



- Gartner estimates that more than 70% of unauthorized access to information systems is committed by employees, as are more than 95% of intrusions that result in significant financial losses ...
- The FBI is also seeing rampant insider hacking, which accounts for 60% to 80% of corporate computer crimes

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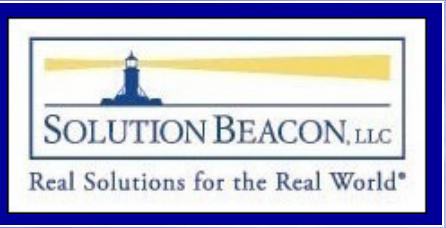
Fact: It may Happen To You



- In 2005, 20 Percent of Enterprises Will Experience a Serious Internet Security Incident – Gartner
- In 2005, 60 percent of security breach incident costs incurred by businesses will be financially or politically motivated – Gartner

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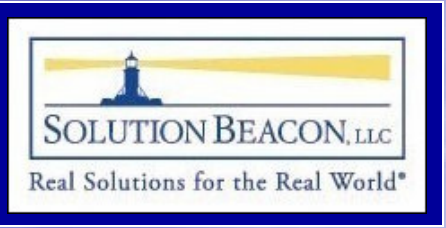
Quotes From Industry Experts



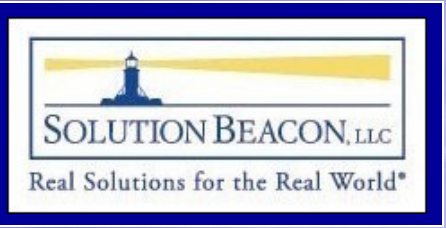
- "Insider attacks are where most of the money's lost, where most of the vulnerabilities are."

  Frank Huerta, Vice President Intrusion-Detection Product Delivery, Symantec

- "Technological protection from external threats is indeed important, but human problems cannot be solved with [only] technological solutions."

  Eric D. Shaw, Keven G. Ruby, & Jerrold M. Post, Security Awareness Bulletin / RAND

Quotes From Industry Experts



- "In the Banking and Finance sector, fraud is typically perpetrated by a non-technical current or former employee. Sabotage, on the other hand, is typically led by a technical disgruntled employee, usually a former employee."

  Dawn Cappelli, Carnegie Mellon University / CERT / Software Engineering Institute

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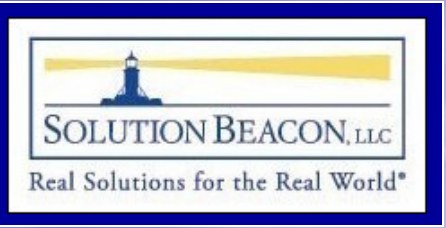
Fact: It may Happen To You



- Are you prepared?
- Can you prevent becoming a statistic?

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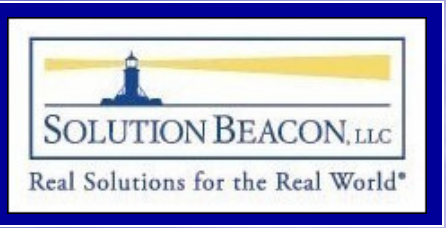
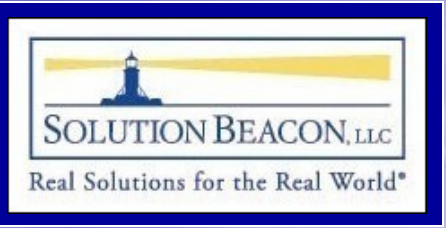
What Is Security?



- Security is a PROCESS that occurs (or doesn't occur) at multiple levels
- Security awareness at organizations varies due to:
  - Business Core Function
  - Organizational Tolerance (e.g. SOX)
  - Prior Incidents

Security Is A Process



- "Process" means it occurs more than once!
  - Policies, Processes and Procedures
  - Internal and External Checks and Balances
  - Regular Assessments (Focus = Improve)
    - Internal
    - Third Party
  - Audits (Focus = $ for Auditors)
    - Necessary Evil
    - Many Don't Understand the Apps

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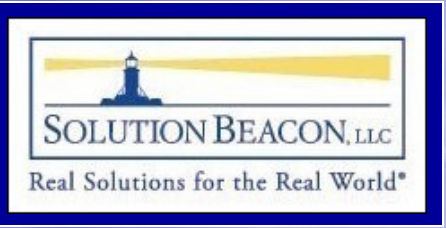
What Is Applications Security?



In an Oracle Applications environment, it's protection of information from:

- Accidental Data Loss
- Employees
- Ex-Employees
- Hackers
- Competition

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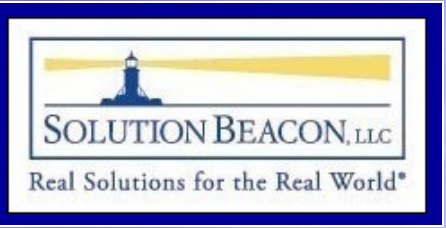
Application Security



- Part Technology, Mostly User Access
- User Security
  - Authentication
  - Authorization
  - Audit Trail

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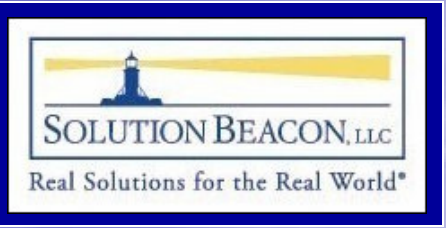
Application Security



- Authentication – Who are you?
- Authorization – What privileges do you have?
- Audit Trail – Effectiveness is almost useless if you can't ensure:
  - Individual accounts are used
  - Individuals are who they say they are

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What is "30 Minute Release 11*i* Applications Security"?

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- Guide to Easily Implement Select Security Controls Consisting Of:
  - User Account Policies
  - Profile Options
- Quick and Easy to Implement
- Low Investment / High Return Value
- "Big Bang for the Buck"
- Required Foundation for other Security Controls

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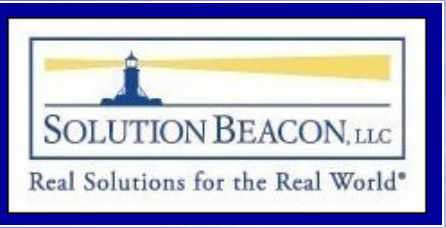
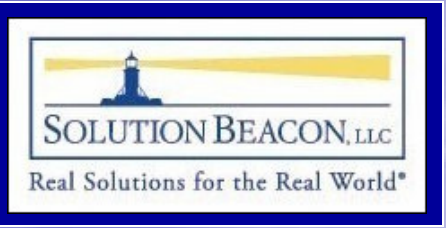
Best Practice: No Shared Accounts



- Difficult or Impossible to Properly Audit
- How Hard Is It To Guess A Username?
- Release 11*i* Feature to Disallow Multiple Logins Under Same Username
- Uses WF Event/Subscription to Update ICX_SESSIONS Table
- 11.5.8 MP
- Patches 2319967, 2128669, WF 2.6

Best Practice: No Generic Passwords



- Stay Away From ‘welcome’!!!
- 11.5.10 Oracle User Management (UMX)
  - User Registration Flow
    - Select Random Password
    - Random Password Generator

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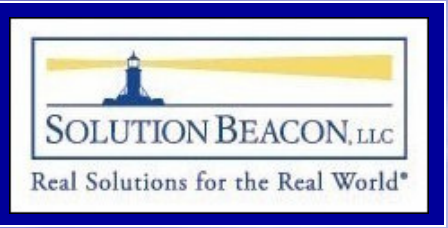
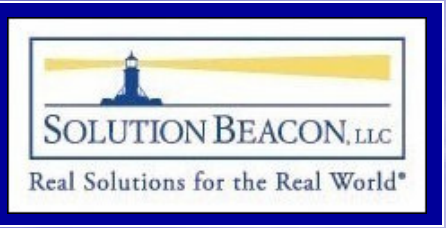
11.5.10 Oracle User Management (UMX)



- UMX leverages workflow to implement business logic around the registration process
- Raising business events
- Provide temporary storage of registration data
- Identity verification
- Username policies
- Include the integration point with Oracle Approval Management
- Create user accounts and release usernames
- Assign Access Roles
- Maintain registration status in the UMX schema
- Launch notification workflows

Profile: Signon Password Length



- Signon Password Length sets the minimum length of an Oracle Applications password value
- Default Value = 5 characters
- Recommendation: At least 7 characters

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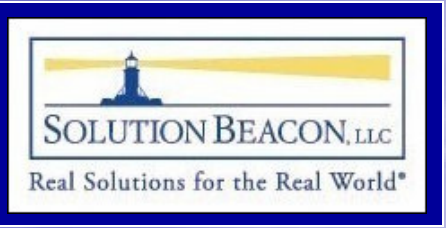
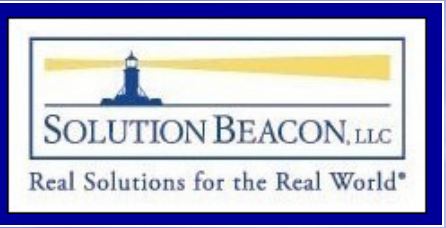
Profile: Signon Password Hard to Guess



- The Signon Password Hard to Guess profile option sets internal rules for verifying passwords to ensure that they will be "hard to guess"
- Oracle defines a password as hard-to-guess if it follows these rules:
  - The password contains at least one letter and at least one number
  - The password does not contain repeating characters
  - The password does not contain the username
- Default Value = No
- Recommendation = Yes

Profile: Signon Password No Reuse



- This profile option is set to the number of days that must pass before a user is allowed to reuse a password
- Default Value = 0 days
- Recommendation = 180 days or greater

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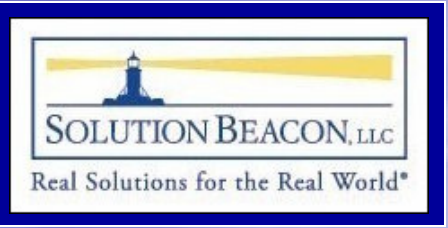
Profile: Signon Password Failure Limit

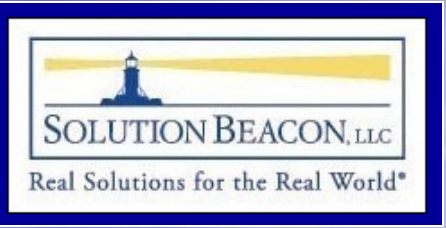
- Default Value = 0 attempts
- Recommendation = 3
- By default, there is no lockout after failed login attempts: This is just asking to be hacked!
- Additional Notes:
  - Implement an alert (periodic), custom workflow or report to notify security administrators of a lockout
  - FND_UNSUCCESSFUL_LOGINS
  - 11.5.10 raises a security exception workflow

Profile: Password Case Option (RUP3)



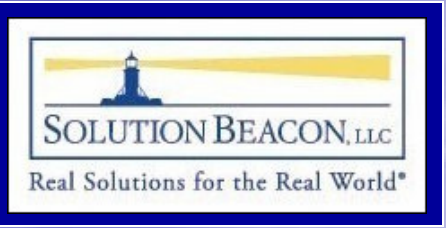
- Enforces case sensitivity for password values:
  - Insensitive
  - Sensitive
  - Mixed
- Introduced in 11i ATG_PF_H RUP3
- 11i ATG_PF_H RUP4 deprecated 'Mixed'

Profile: Signon Password Case (RUP4)



- Enforces case sensitivity for password values:
  - Insensitive
  - Sensitive
  - Mixed
- Introduced as 'Password Case Option' in ATG_PF_H RUP3
- 11i ATG_PF_H RUP4 deprecated 'Mixed'

Force Apps User Passwords To Expire



- By default, passwords do not expire
- Define User screen – Password Expiration
  - Days
  - Accesses
  - None (Default)

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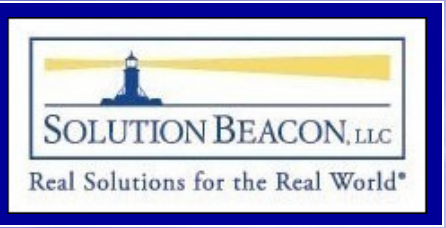
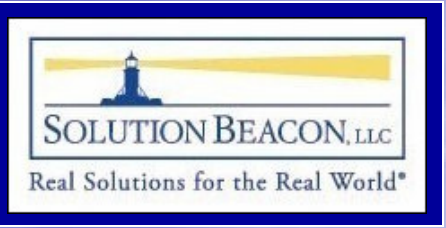
Profile: ICX:Session Timeout



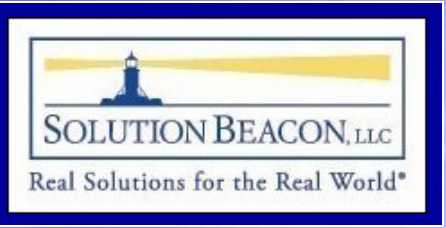
- The length of time (in minutes) of inactivity in a user's form session before the session is *disabled*.
- Default value = none
- Recommendation = 30 (minutes)
- Also set *session.timeout* in *zone.properties*
- Available via Patch 2012308
  (Included in 11.5.7, FND.E)

Change Your System PWs Frequently!



- apps, applsys, gl, ap, ar, etc.
- FNDCPASS - MetaLink Note: 159244.1
- 'ALLORACLE' mode – 11i.ATG_PF.H RUP4
  - Changes all E-Biz Oracle passwords
  - Exception: apps and applsys
  - I don't encourage its use

Notes On Oracle DB Password Values



- If the password is not enclosed in quotes then it can include any letter, any digit, or any of the three following special characters: "_", "#" or "$".
- Only a letter can be used in the first character, the other characters can be used after that.
- It is important to remember that Oracle passwords are not case sensitive so the valid alphabet is reduced by 26 characters. That is "a" is the same as "A".

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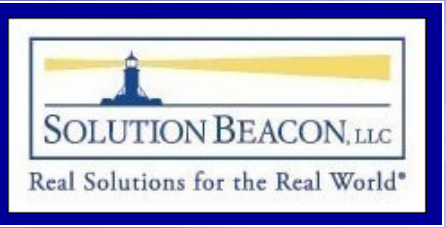
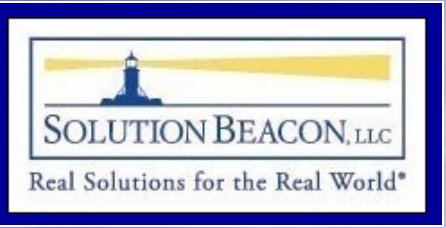
Minute 31 – Your Next Steps



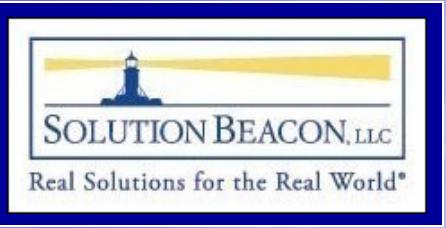
- Be Paranoid!
- Review/Update/Create Security Processes, Procedures and Policies
- Be Proactive – Monitor Security Sources
  - CERT (OS, products, and more)
  - Oracle
- Apply Oracle Critical Patch Updates
  - Quarterly Releases
  - Not Cumulative!

E-Business Suite Critical Patch Update Note 372931.1



- For the October 2006 Critical Patch Update (CPUOct2006), the minimum supported baseline for Oracle E-Business Suite Release 11.5.10.x will be Oracle Applications Technology 11*i*.ATG_PF.H **RUP3** (4334965).
- The 11.5.10 CU2 for ATG Product Family will **not** be a supported baseline for CPUOct2006.
- The minimum supported baseline for all other 11i releases, including 11.5.7, 11.5.8, and 11.5.9, will remain at the patch levels listed in Note 363827.1

E-Business Suite Critical Patch Update Note 372931.1



- Oracle recommends that all Release 11*i* customers uptake Oracle Applications Technology 11*i*.ATG_PF.H Rollup 4 (4676589).
- Beginning with the July 2007 Critical Patch Update (CPUJul2007), Oracle Applications Technology will support only the current and previous production rollups (RUP N and RUP N-1) as patching baselines for all 11*i* releases.

Minute 31 – Your Next Steps (CPU)

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- Rebaselined ATG Components - 11.5.7 thru .10 (363827.1)
- Prior E-Business Suite Security Alerts (315713.1)
- E-Business Suite Critical Patch Update Note (372931.1)
- Oracle ATG Newsletter - August 2006, Volume 2 (387436.1)
- Old? FAQ Documents (237007.1 and 360470.1)

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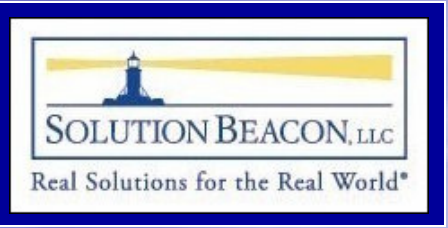
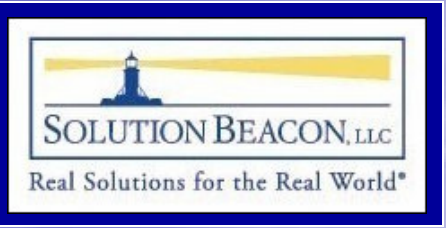
ROAD TO Las Vegas

Minute 31 – Your Next Steps (continued)



- Protect Your Data!
- No Direct Access to Database
  - Only Allowed Via An Application
  - Does not mean that people can't do their job!
  - Reduces the number of attack vectors
  - Implemented via tcp.invited_nodes in sqlnet.ora
  - Oracle's Recommendation
  - MetaLink Note: 277535.1

Minute 31 – Your Next Steps (continued)

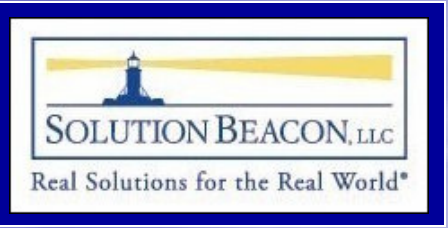


- No Direct Access Example (sqlnet.ora)

```
tcp.validnode_checking = YES
tcp.invited_nodes = (192.168.1.91)
tcp.excluded_nodes = (192.168.1.89, 192.168.1.90)
```

- In a multi-node/server configuration, the E-Business Web Node, Admin Node, Forms Node and Concurrent Processing Node servers would be included in the list of invited nodes, as well as any other administrative or monitoring servers (e.g. Oracle Enterprise Manager).

Minute 31 – Your Next Steps (continued)



- Harden Operating System
- Harden Database
- Harden E-Business Suite Tech Stack
- Internal Assessment
- Third Party Assessment
- Continuous Process Improvement

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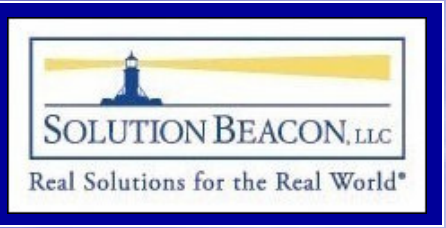
Questions and Answers



Thank you!

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Watch for our new book:

Installing, Upgrading and Maintaining Oracle E-Business Suite Applications 11.5.10.2

It's coming THIS YEAR!

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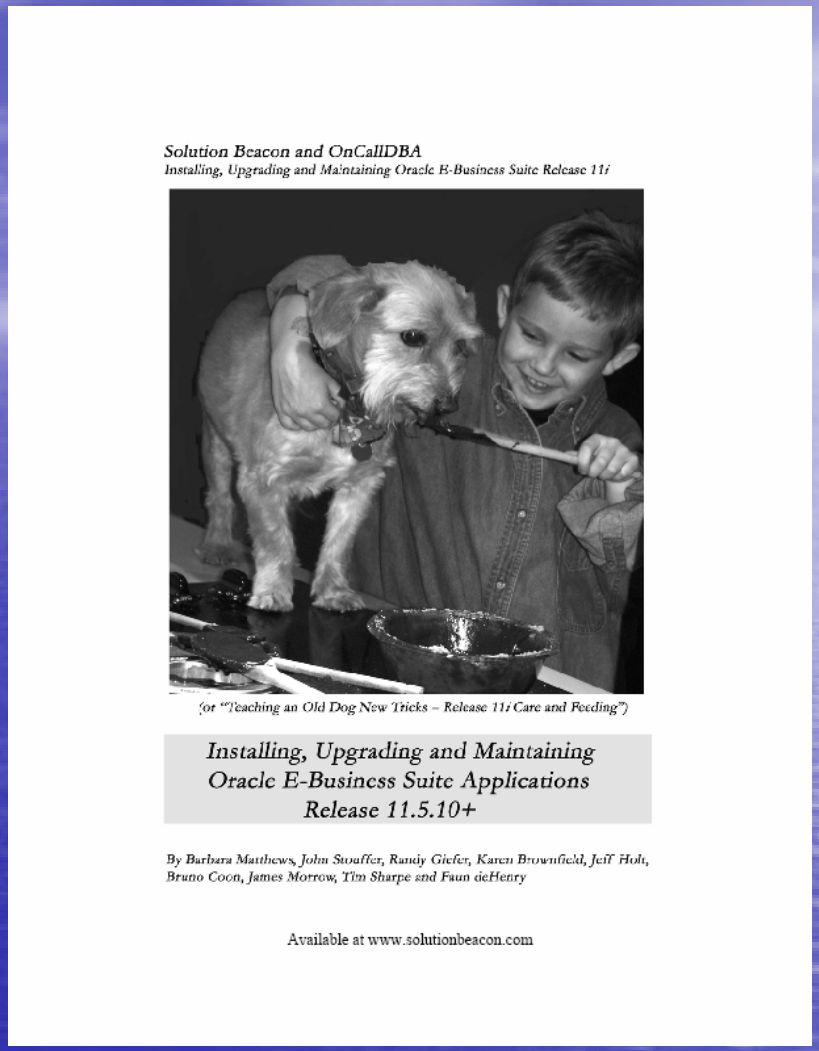

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