

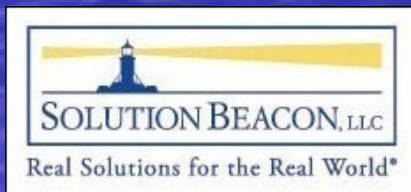


# Oracle E-Business Suite Release 11*i* and Release 12 Care and Feeding

John Stouffer  
Applications DBA  
Solution Beacon, LLC

Release 11*i* Workshops  
Dallas, TX • Cincinnati, OH  
Denver, CO • Atlanta, GA • Detroit, MI  
Las Vegas, NV

[www.solutionbeacon.com](http://www.solutionbeacon.com)



# Are you an OAUG Member?



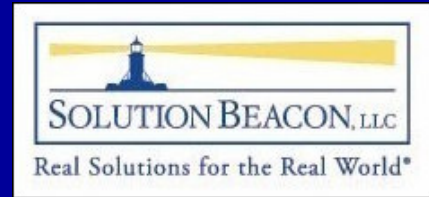
## Member Benefits include:

- ◆ **Advocacy** opportunities to influence Oracle on product enhancements, usability, new features, Oracle support, pricing and quality
- ◆ **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
- ◆ **Communication** with other OAUG members worldwide through participation in OAUG committees, leadership positions, interaction with Oracle Corporation's user initiatives, frequent member surveys, and Oracle management briefings
- ◆ **Education** through the hundreds of career-enhancing presentations in our conference paper database archive, as well as discounts to conferences and Oracle education
- ◆ **Networking** with Oracle customers, industry experts, third-party software firms, and other Oracle Applications specialists through our Member Database and Online Vendor Directory



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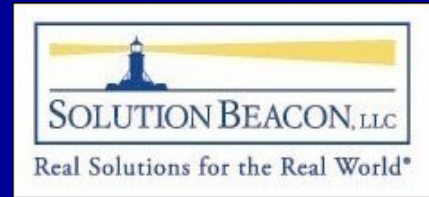
# John Stouffer



- ◆ Oracle DBA 18+ Years
- ◆ Oracle Apps DBA 13+ Years
- ◆ OAUG Co-Chair for Fusion Applications
- ◆ OAUG Upgrade SIG Chair
- ◆ Release 8 to 11i
- ◆ RDBMS Version 5 to 10g
- ◆ [jistouffer@solutionbeacon.com](mailto:jistouffer@solutionbeacon.com)



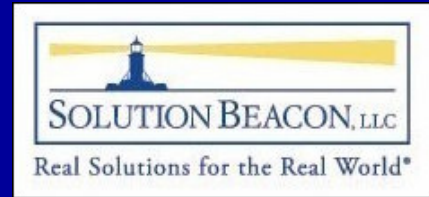
# Audience



- ◆ Functional/Technical
- ◆ PeopleSoft, JD Edwards, Retek, Siebel
- ◆ Oracle E-Business Suite
  - Release 10.7
  - Release 11.0.3
  - Release 11i
  - HR/Payroll
  - Application Technology Group Rollup
  - RDBMS Version
  - Platform
  - Storage



Release 11*i*

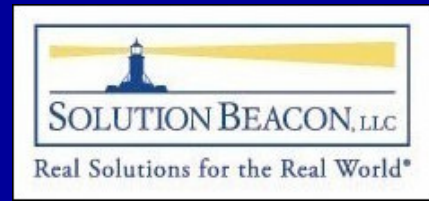


# Concepts



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# Release 11i Terminology



## ◆ 11i is 11.5.x or 11i.x

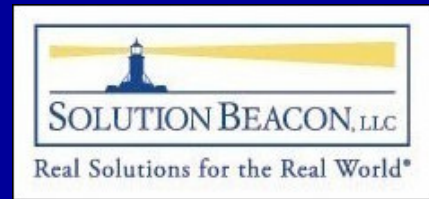
- 11.5.1 ... 11.5.2 ... ... 11.5.10

## ◆ Point Release

- Applies to all products in all suites
- CD/DVD Bundle or Maintenance Packs (11.5.6 – MP only)
- Updates the “point” number (11i.8 -> 11i.9 or 11.5.9 -> 11.5.10)



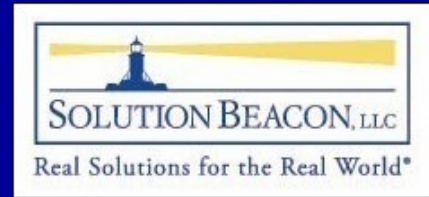
# Release 11*i* Basics to Remember



- ◆ Release 11*i* is not a static release
- ◆ Release 11*i* installs everything regardless of licensing and de-normalizing the data in the database for reporting performance
- ◆ Release 11*i* contains constantly evolving technology components
- ◆ Release 11*i* point upgrades introduce significant changes to functionality and technology
- ◆ Release 11*i* has significant interdependencies of Critical Pseudo Products: AD, FND, AK, HZ (TCA), OWF, TXK, ADX, SHT, ATG, AU, FWK, OAM, UMX



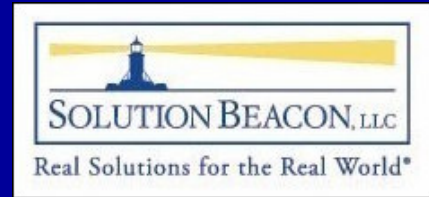
# What is Release 11*i*?



- ◆ The Biggest and Most Complex Oracle Applications Release Ever!
- ◆ Ten\* CD/DVD bundle releases containing:
  - major changes to the tools and technology stack
  - bug fixes
  - NEW and CHANGED functionality!



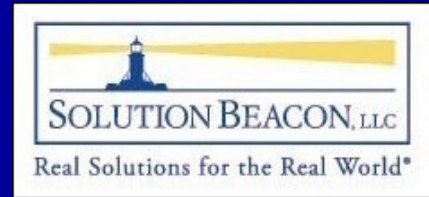
# What is Release 11*i*?



- ◆ Completely New Architecture, Tools and Technology – True Three-Tier
  - Internet Computing Architecture (ICA)
  - Technology Stack – Forms, Java, Apache(html)
  - Oracle8*i*/Oracle9*i*/10*g* – CBO, Partitioning
- ◆ Multiple Application Server Components
  - Forms-Based: ERP, Back Office
  - HTML/JAVA-Based: Self Service, Workflow, “*i*” Products
  - Business Intelligence: Discoverer 3*i*/4*i*/10*g*, Reports, XML (BI) Publisher



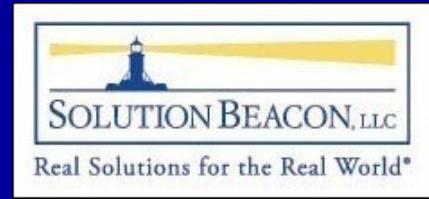
# Release 11*i* Concepts



- ◆ All or Nothing: Oracle Applications Software and Database – No sharing of Software/Objects
- ◆ Multiple Component Requirements: Database Software (3), Forms, Reports, Java, JDBC, Apache, Self-Service (OA) Framework, Workflow, XML Gateway
- ◆ Hybrid Application: OLTP/Batch/Web Coexist and Each is Separate Database Distribution



# Release 11*i* Products

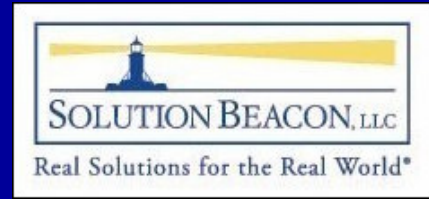


## ◆ Increased Modules, Functionality, and Features

● Release 10.7	40 products
● Release 11.0.x	50 products
:	:
● Release 11.5.5	161 products
● Release 11.5.6	175 products
● Release 11.5.7	179 products
● Release 11.5.8	191 products
● Release 11.5.9	197 products
● Release 11.5.10	209 products



# Release 11*i* Bug Fixes



◆ More stable functionality (technical and applications) continuously appearing with each major patch release

- 11.5.5/6 — ~ 20,000 bug fixes
- 11.5.7 — ~ 40,000 bug fixes
- 11.5.8 — > 60,000 bug fixes
- 11.5.9 — > 100,000 bug fixes
- 11.5.10 — ~ 180,000 bug fixes

◆ Initially released on Oracle9*i* ... now 10gR2 certified

◆ ATG Introduced

◆ Workflow changed ... again

◆ Rapid cloning changed ... again

◆ AD enhancements ... again

◆ New Java framework – 5.10 ... again

◆ JInitiator 1.3.1

**Note: Metrics from Vision Environments**



# Release 11*i* Objects



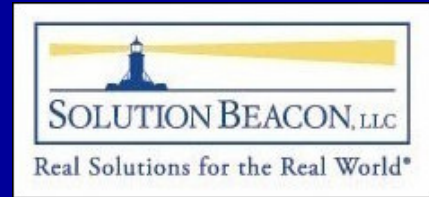
◆ “Stub” applications, performance improvements, additional functionality continuously appearing with each major patch release

● 10.7	—	~ 25,000 objects
● 11.0	—	~ 30,000 objects
● 11.5.5/6	—	~ 200,000 objects
● 11.5.7	—	~ 240,000 objects
● 11.5.8	—	~ 280,000 objects
● 11.5.9	—	~ 310,000 objects
● Fresh* 11.5.9	—	~ 200,000 objects
● 11.5.10	—	~ 270,000 objects

*Note: Metrics from Vision Environments*



# Release 11*i* Architecture – 11.5.10.0



## ◆ Client

- Oracle JInitiator 1.3.1.18 on Client

## ◆ Middle Tier

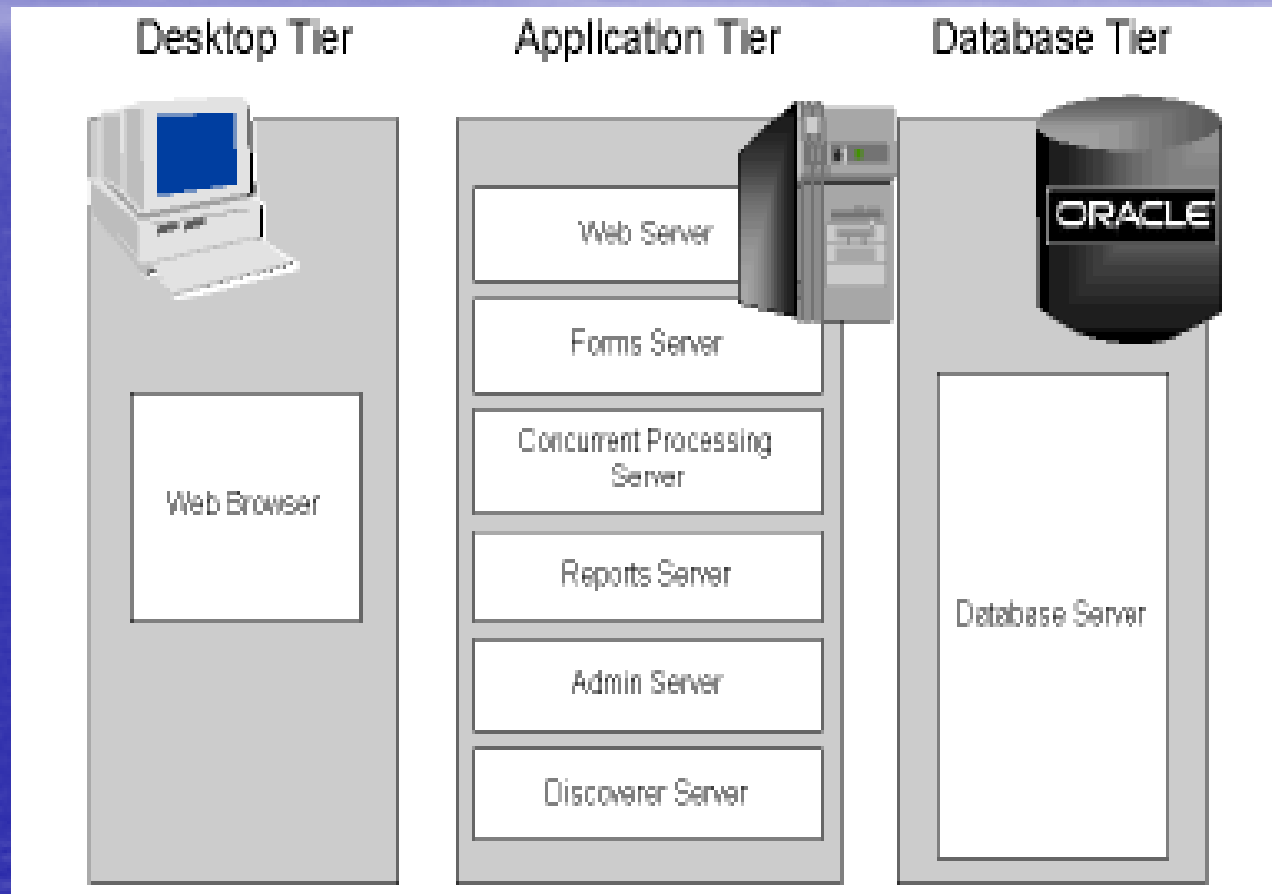
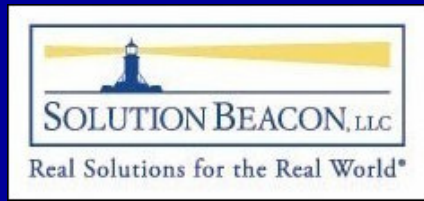
- Apache Web Server 1.3.19 (Full – jsp, JServ)
- JRE (Java Runtime Environment) 1.4.2\_04-b05
- JDK (Java Development Kit) 1.4.2
- Oracle Applications Java Framework 5.10
- Oracle Forms/Reports 6*i* (6.0.8.24 – Patch 15)
- Workflow 2.6.3 (OWF.H)

## ◆ Database Tier

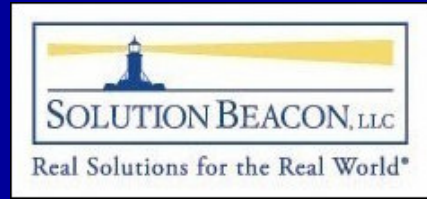
- Oracle9*i* Enterprise Edition 9.2.0.5
- Other Oracle Home Software Directories – App 8.0.6.3, iAS 8.1.7 = 9iAS 1.0.2.2.2 (Release 1)
- Oracle Portal 3.0.9.8.4
  - Discoverer 4*i* (4.1.48) – 10/31/06



# Release 11i Architecture

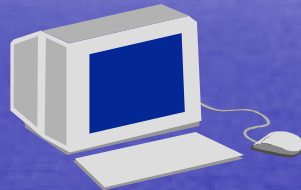


# Release 11i Architecture – Components



## Release 11.5.10.2 DVD Release

Client Tier



**JInitiator**

Middle Tier

Web HTTP Servers

**Apache**

**Discoverer Server\***

\*optional

Application Technology Stack

**Admin Server**

**Concurrent Processing Server**

**Forms Server**

**Reports Server \***

9iAS ORACLE\_HOME  
(1.0.2.2.2)

8.0.6.3 ORACLE\_HOME

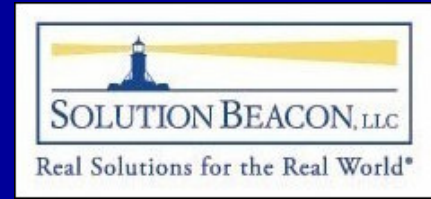
Database Tier

**9.2.0.6 Database**

9.2.0.6 ORACLE\_HOME  
upgrade!



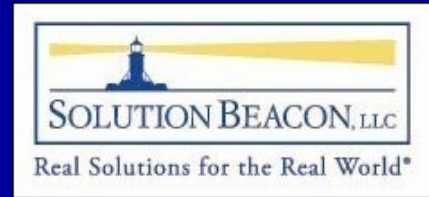
# Recommended Architecture



- ◆ Five Nodes – MetaLink 285267.1
  - Database \*
  - Administration
  - Concurrent Managers
  - Forms
  - Web
- ◆ Recommendations for Ease of Support and Maintenance
  - Single User
  - Single Logical Disk Mountpoint
  - Shared Application File System > Single Tier
  - Oracle Applications Tablespace Model (OATM)



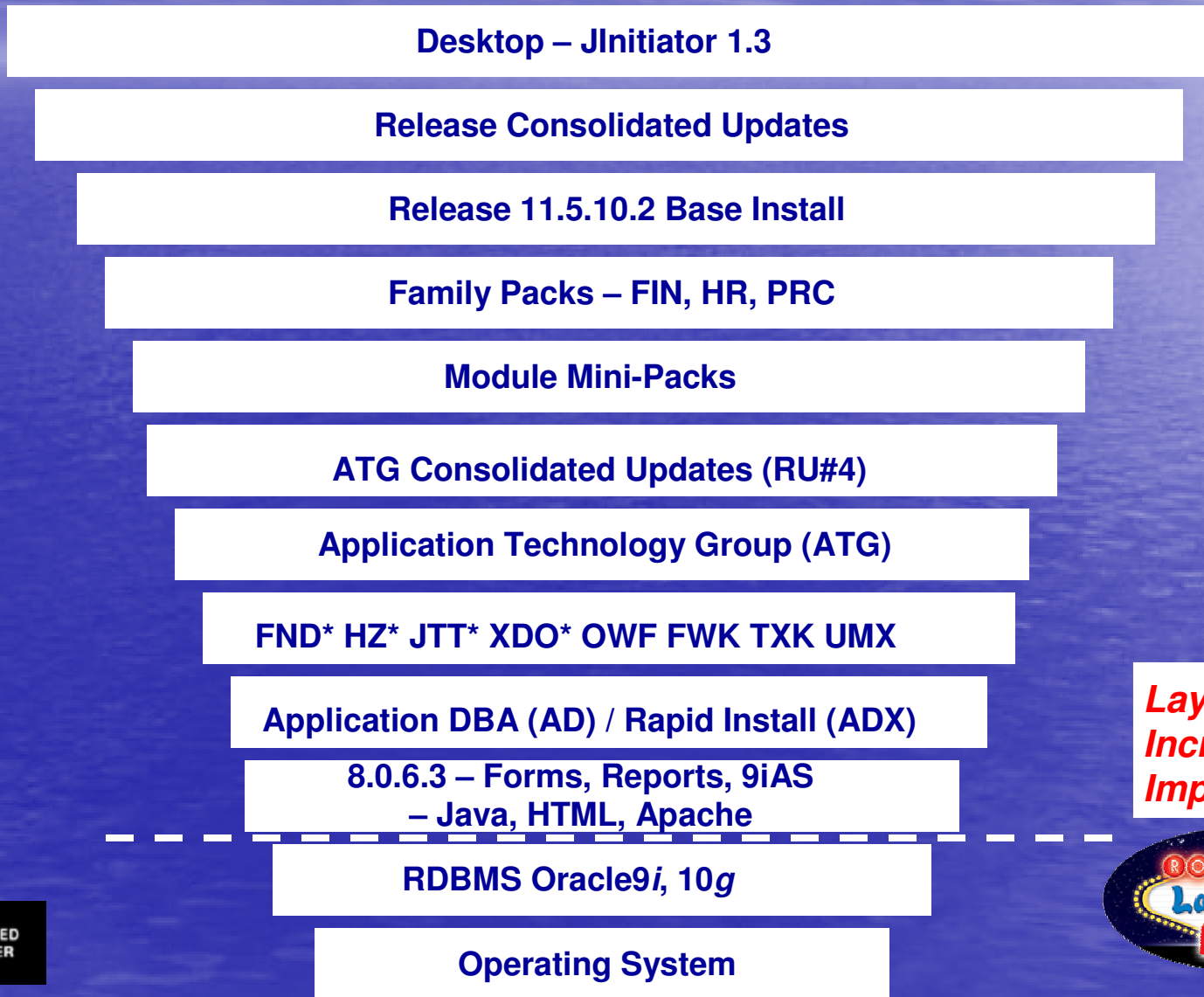
# 11.5.10.2 – Applications Interdependencies – January 2007



- ◆ Release 11.5.10.2 – 8 out of 22 Family Packs Out of Date (HR, BIS, FIN, PROJ)
- ◆ Consolidated Update #1 – Superseded
- ◆ Consolidated Update #2 – Available
- ◆ Consolidated Update #3 – CANCELLED
- ◆ 11.5.10.2/9.2.0.8 Certified
- ◆ 10gR2 Certified (Release 12 Utilizes 10gR2)
- ◆ Fusion Applications Jump-Off Points – Releases 11.5.10.2 and 12
- ◆ Lifetime Support Eligible – Releases 11.5.10.2 and 12



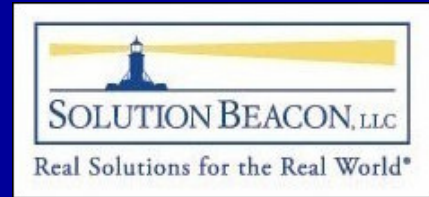
# 11.5.10.2 – Applications Interdependencies – January 2007



*Layers of Increasing Impact*



Release 11*i*

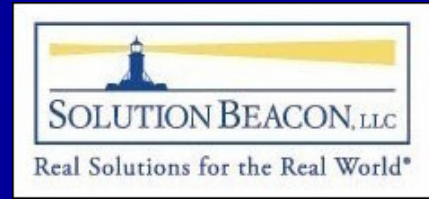


# Patching



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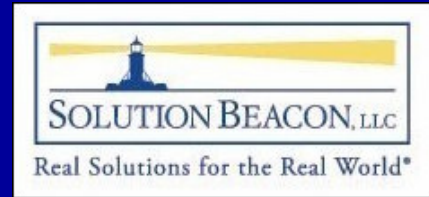
# Patch Definitions



- ◆ **Media Pack (50+ CDs, 10-15 DVDs)**
  - 11.5.10.0 – November 2004, 11.5.10.2 – July 2005
  - Entire Applications Release Including Technology
  - Desktop Components
  - Documentation
  - Latest Maintenance Pack Included
- ◆ **Maintenance Pack (AU – 11.5.10)**
  - Entire Code Set Release for All Application Modules
  - No Technology Patches or Components Included
  - Lots of Pre/Post Tasks, VERY Long-Running
  - Consolidated Update Patches – 11.5.9 and 11.5.10
- ◆ **Family Pack (HR\_PF.K) – Currently 22**
  - All Product Modules Mini-packs for the Specific Family
  - Lots of Pre/Post Tasks, VERY Long-Running
- ◆ **Product Mini-Pack (GL.H)**
  - Entire Patch Set for Specific Application Modules
  - Functionality Changes AND Bug Fixes
- ◆ **One-Off Bug Patch (High Priority)**
  - Fixes Specific Issue, No Regression Testing



# Patchsets.sh Comparison Utility



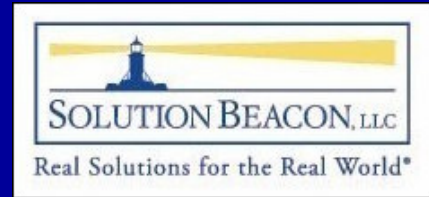
Patchset Comparison Utility Found on Oracle's FTP Site:

[ftp://ftp.oracle.com/apps/patchsets/PATCHSET\\_COMPARE\\_TOOL/](ftp://ftp.oracle.com/apps/patchsets/PATCHSET_COMPARE_TOOL/)

- ◆ Updated Nightly By Oracle
- ◆ Can Be used For 10.7, 11.0.x and 11.5.x
- ◆ Displays Currently Available Patchsets
- ◆ Reads the applptch.txt File or the database
- ◆ Produces Reports on Differences



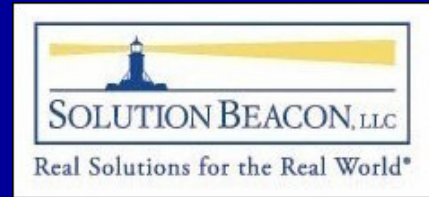
# OAM Patch Advisor



- ◆ OAM.G Mini-Pack
- ◆ MetaLink Document 226826.1
- ◆ Uses InfoBundle11i.zip



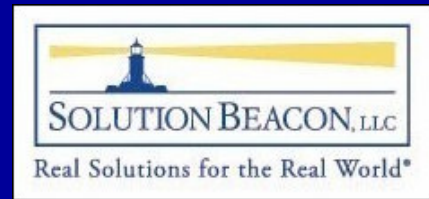
# InfoBundle11i.zip



- ◆ Updated Nightly by Oracle
- ◆ Updates Patch Snapshot Repository
- ◆ Recommended Patch List
- ◆ Includes Patch Prerequisites
- ◆ MetaLink Document 233039.1



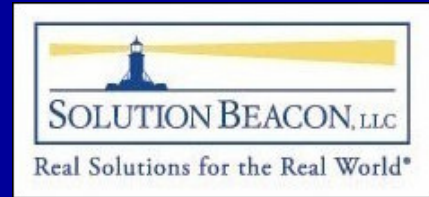
# Patch Application Methods



- ◆ Manual (Interactive)
- ◆ Automated (Non-interactive)
- ◆ Merge Patch Utility (Automated)
- ◆ OAM (Oracle Applications Manager)
- ◆ Commercial (RingMaster APM)



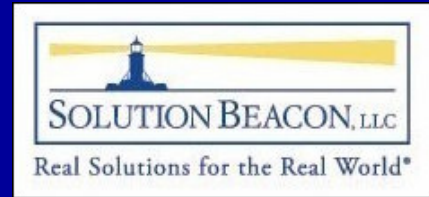
# Patch Management/Tracking



- ◆ Manual (applptch.txt)
- ◆ Manual (spreadsheet)
- ◆ Manual (patchsets.sh)
- ◆ Database (AD patch – AD.E)
- ◆ Commercial (RingMaster APM)



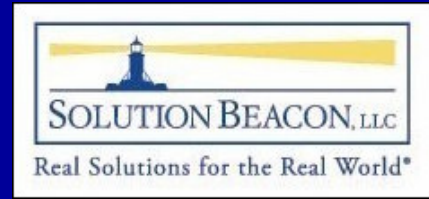
# Oracle Patch Documentation



- ◆ Maintenance Procedures – July 2005 (B19299-01)
- ◆ Maintenance Utilities – July 2005 (B19300-01)
- ◆ Steven Chan's Blog
  - <http://blogs.oracle.com/schan>



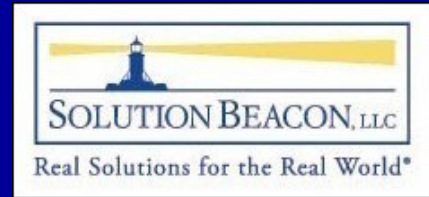
# Minimal Patching – Security Patches



- ◆ Security Docs
  - (189367.1, 277535.1, 287176.1, 217368.1)
- ◆ Applications Codeset \$APPL\_TOP
- ◆ Web Tier \$ORACLE\_HOME
- ◆ Application Tier \$ORACLE\_HOME
- ◆ Database Tier \$ORACLE\_HOME
- ◆ Minimum Technology Baseline (363827.1)
- ◆ Oracle's Quarterly Critical Patch Update
  - Significant Impact – Database, Tools and Apps
  - Plan as Part of Release/Change Mgmt
  - MetaLink Doc. ID: 265987.1
  - [www.integrigy.com](http://www.integrigy.com) – Patch Impact Analysis



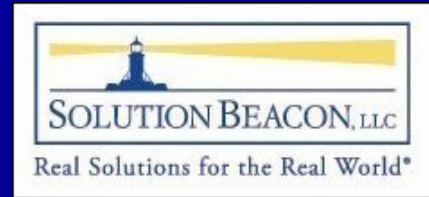
# Patch Tips



- ◆ Pre-Patched/Staged \$APPL\_TOP
  - MetaLink 242480.1
- ◆ Shared Application File System
  - MetaLink 233428.1
- ◆ Distributed AD Patching
  - MetaLink 236469.1



Release 11*i*

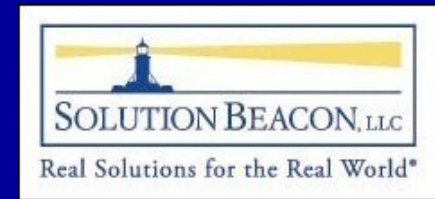


# Performance



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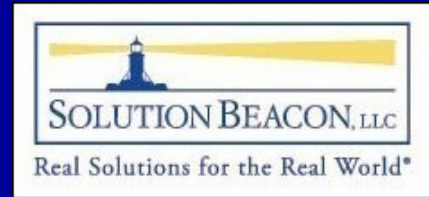
# Performance Considerations



- ◆ Patched Current
- ◆ Pinning
- ◆ Statistics
- ◆ Diagnostics



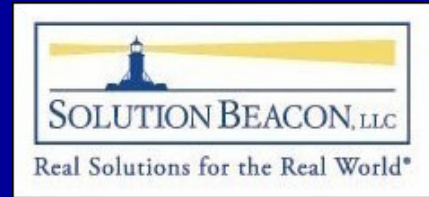
# Patched Current



- ◆ Latest, greatest optimized code
- ◆ Interdependencies between modules
- ◆ New functionality and features
- ◆ Changed functionality



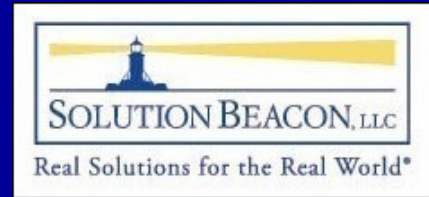
# Pinning



- ◆ Oracle Applications requires space in the ORACLE System Global Area (SGA) for stored packages and functions; if SGA space is fragmented, there may not be enough space to load a package or function; you should pre-allocate space in the SGA shared pool for packages, functions, and sequences by "pinning" them
- ◆ Pinning objects in the shared pool can provide a tremendous increase in database performance, if it is done correctly; since pinned objects reside in the SQL and PL/PLSQL memory areas, they do not need to be loaded and parsed from the database, which saves considerable time
- ◆ PIND Pinning Toolkit – MetaLink 301171.1



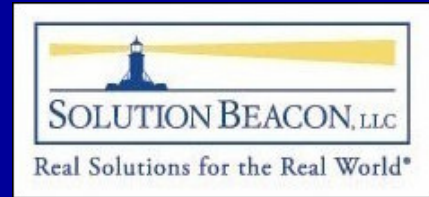
# Statistics



- ◆ The Concurrent Program Gather Schema Statistics should be run weekly (at a minimum) using ALL, 99 and NOBACKUP values unless time prohibits
- ◆ Minimum Gather Statistics should be run weekly against all non-sys/system objects using 10%
- ◆ Additionally, a separate statistics gathering process should be run daily on high transactions modules (e.g. AP, PO, OE, ONT, PA, PAY) during low processing periods
- ◆ Using any value larger than 50 will force a compute vs. an estimate for statistics; any value < 50 only provides estimated statistics. Computed statistics provide a significant performance improvement for Application modules
- ◆ FND\_STATS Required – MetaLink 141532.1



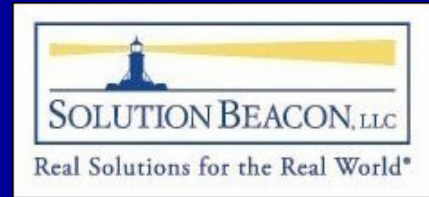
# Diagnostics



- ◆ Diagnostics 2.4 RUP A
- ◆ Remote Diagnostic Agent (RDA) 4.6
- ◆ Application Collection Tool (ACT)
- ◆ BDE Scripts
- ◆ Statspack
- ◆ TUMS-MP, Technology Validation Utility



# Release 12



## Launch Event for E-Business Suite Release 12

**Wednesday, January 31, 2007**

9:00 a.m. Registration and Breakfast

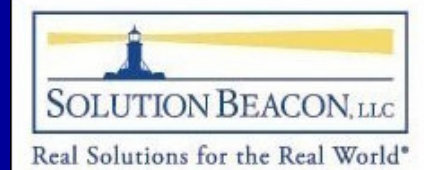
10:00 a.m. – 1:30 p.m. Event

Hudson Theater  
145 West 44th Street  
New York, NY

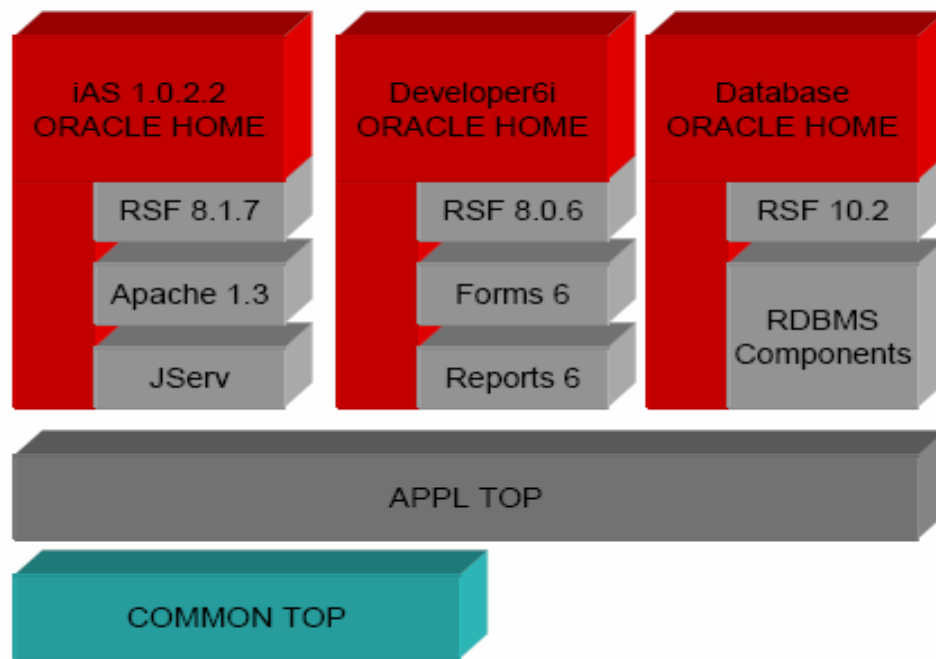


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# Release 11i Components



## 11i Installed & Managed File System



### Major Components:

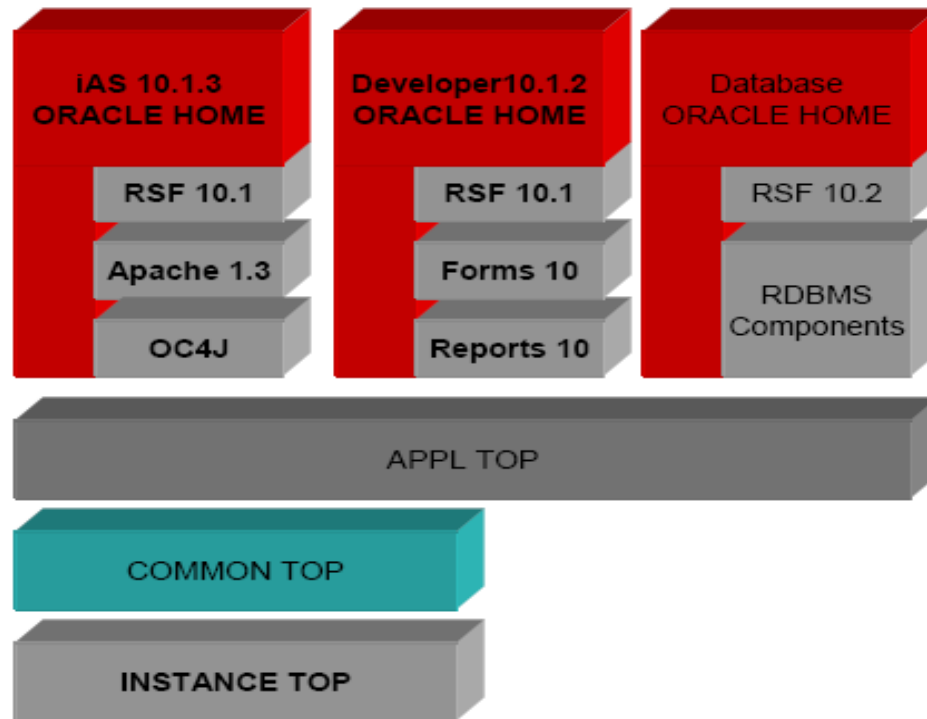
- Java Home: 8.1.7-based iAS 1.0.2
- C Home: 8.0.6-based Developer 6
- Database Home: 10.2
- Appl Top: Applications' code staging area
- Common Top: Runtime location for Java, HTML, run-time generated files



# Release 12 Components



## R12 Installed & Managed File System

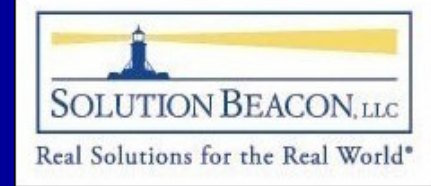


### Major Components:

- Java Home: 10.1-based iAS 10.1.3 –*new*
- C Home: 10.1-based Developer 10 standalone install of AS 10.1.2 phase2 –*new*
- Database Home: 10.2
- Appl Top: Applications' code staging area
- Common Top: Runtime location for Java, HTML
- Instance Top: configuration and runtime generated files –*new*



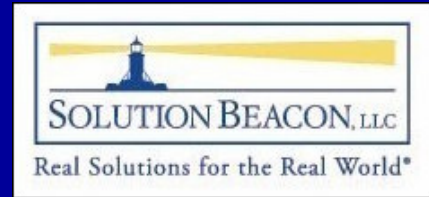
# Release 12 Components



- ◆ Sun's Native 1.5 Java Runtime Environment (JRE)
- ◆ Java Home 10.1.3
  - Required Support Files (RSF) 10.1
  - Apache 1.3.34
  - OC4J – Oracle Containers for J2EE
    - ◆ Execute Servlets, Java Server Pages (JSP) and Enterprise Java Beans (EJB)
    - ◆ Three Instances (Oacore, Forms, OAFM)
    - ◆ Deploys EAR (Enterprise Archive), WAR (Web Application Files), JAR (Web Application Code), JSP and HTML
    - ◆ Oracle Process Manager and Notification Server (OPMN)
- ◆ Developer Home 10.1.2
  - Required Support Files (RSF) 10.1
  - Forms
    - ◆ Swan UI
    - ◆ Servlet
    - ◆ Forms Trace
    - ◆ Forms Generator
  - Reports (Only Available from Concurrent Managers)
  - 'C' Code
- ◆ Database Home 10.2.0.2
- ◆ APPL\_TOP
  - Application Code
- ◆ COMMON\_TOP
  - Runtime Java and HTML
- ◆ INSTANCE\_TOP
  - Configuration Files



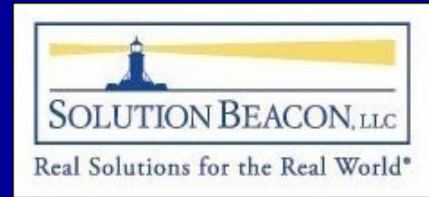
# Release 12 Changes



- ◆ No JInitiator
- ◆ No mod\_plsql
- ◆ No Oracle Graphics – Rewrite with XML Publisher and OAF/BI Beans
- ◆ Report Server Not Utilized
- ◆ OC4J Replaces JServ with Orion-web.xml, Orion-application.xml, OC4J.properties and Server.xml
- ◆ Not Included in Rapid Installation
  - Discoverer 10.1.2
  - SSO/OID 10.1.2
  - Portal 10.1.4
  - WebCache 10.1.2
  - Collaboration Suite 10.1.2
  - Warehouse Builder 10gR1
  - Enterprise Manager 10.1.2
  - Integration Server 10.1.3
  - Forms Developer Installed Separately as Part of Developer Suite



# Release 12 Next Steps\*\*

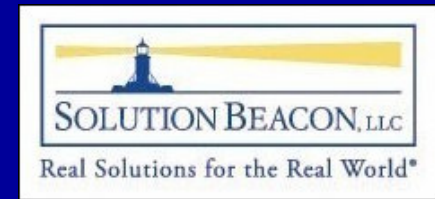


- ◆ Upgrade Database to 10gR2
- ◆ Review mod\_plsql
- ◆ Migrate to XML (BI) Publisher
- ◆ Install Forms/Reports Builder 10.1.2
- ◆ Review Custom.pll Library
- ◆ 10% Larger Database

\*\*Subject to Change



# Questions and Answers



Thank you!

And *Remember:*

**Keep It Simple and Supportable<sup>SM</sup>**

John Stouffer

[jstouffer@solutionbeacon.com](mailto:jstouffer@solutionbeacon.com)

[www.solutionbeacon.com](http://www.solutionbeacon.com)

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