Get ready for EBS Release 12! Tasks to complete now to ease R12 upgrade process

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Abstract

Oracle has recently released EBS Release 12 and the first thing that comes to mind is "Oh no, we need to upgrade AGAIN". As complex Oracle Applications upgrade projects have gotten there are tasks and steps you can complete today in order to get ready and better prepare your 11i EBS environment for Release12 upgrade.
Release 12 is the biggest and most complex applications release ever! Oracle has introduced major changes to database, tools and technology stack. As DBA, developer or architect what can you do today to slowly ease into a new Release 12 world?
This presentation will review in detail tasks you can complete in your existing 11i environment to prepare for R12 upgrade in order to save time, reduce cost, decrease risk and resources needed, and eliminate complexity of R12 upgrade.

About Speaker

Sandra Vucinic has over fourteen years of experience with Oracle database administration specifically supporting Oracle Applications environments including installation, implementations, administration, maintenance, upgrades and remote support. Her focus is in areas of infrastructure planning, architecture design, review and support with emphasis on Oracle Applications implementations and upgrades.
For years Sandra has been a presenter and panel member at OAUG, NCOAUG, CSOAUG, OVOAUG, SROAUG, Oracle Apps World and Oracle Open World Conferences (55+ sessions). Sandra continues to be active in the OAUG organization. For a sixth year Sandra continues to serve on the Board of Directors for OAUG Database Special Interest Group and OAUG SysAdmin Special Interest Group. In 2004, Sandra joined the SROAUG Board as the Secretary Director and Communications Director. In 2005, Sandra has accepted a position on the OAUG Middleware Special Interest Group (formally known as Applications Technology Stack SIG) Board of Directors and currently serves as the Membership Director. In 2007, Sandra joined OAUG GEO/SIG Committee.

This presentation will discuss the following topics:

- Why do we need to upgrade?

- EBS Release 11.5.10.2 vs. 12 Architecture

- Tasks to complete to ease R12 upgrade:

    – Upgrade database to 10g R2

    – Convert tablespaces to OATM model

    – Evaluate impact of R12 on customizations and extensions

    – Introduce XML Publisher and JDeveloper

    – Integrate Discoverer Server Release 10g with EBS 11*i*

    – Configure Oracle iAS Release 10g for external apps (SSO, OID, Portal) and integrate with EBS 11*i*

    – Position for high availability and scalability

    – Evaluate and complete platform change based on ROI

Why do we need to upgrade?

Since Oracle has announced general availability of EBS R12 software many organizations have asked an obvious question: Why do we need to upgrade? Given that each organization is different there are many aspects of a business to review in order to determine "readiness" to upgrade to a new release of Oracle applications. The general recommendation is to evaluate business benefits and cost including:

    – Assessing EBS R12 functionality and features for "in use" and future planed modules for each organization.

    – Completing ROI analysis to understand architectural or deployment capabilities in EBS R12 and benefits for system performance, availability, scalability, security and manageability.

    – Evaluating upgrade cost, resources and timeline impact on other planed projects within organization.

- Reviewing existing 11*i* customizations, extensions and third party integration and evaluate R12 impact.

- Since 11.5.10.2 is a terminal release of 11*i* Oracle development's priority is R12

- Keep in mind that Premier Support for:

  - Oracle EBS release 11.5.8 ends on November 2007

  - Oracle EBS release 11.5.9 ends on June 2008

  - Oracle EBS release 11.5.10 ends on November 2009

Answering the above questions within business units and IT will help business determine "readiness" for the upgrade, cost, benefits, resource needs and allow each organization to establish its own timeline for the upgrade based on needs and additional projects lined up within organization.

EBS Release 11.5.10.2 vs.12 Architecture

Release 12 is the biggest and most complex applications release ever! Oracle has introduced major changes to database, tools and technology stack.

The EBS R12 has introduced new versions of middle tier technology. The following are technology changes in EBS R12:

- Applications server: changed from version 1.0.2.2.2 in EBS R11i to version 10.1.3.0.0 (J2EE) in EBS R12.
- Apache: changed from version 1.3.19 in EBS R11i to version 1.3.34 in EBS R12.
- Forms and Reports: changed from version 6i in EBS R11i to version 10.1.2.0.2 in EBS R12.
- Discoverer: changed from version 4i in EBS R11i to version 10g (10.1.2.0.2) in EBS R12.
- Servlet Container: changed from JServ in EBS R11i to OC4J in EBS R12
- EBS R12 has introduced a new JDK version - 1.5.0_08.

In addition there are also changes for the Technologies External to EBS R12. The following are some additional changes in EBS R12:

- The version of Oracle SSO and OID certified with EBS R12 is 10.1.2.0.2.
- The version of Oracle Portal certified with EBS R12 is 10.1.4.

Oracle has also introduced a concept of an Instance Home (INST_TOP) file system:

- $INST_TOP = $HOME/inst/apps/<context_name>

Once on EBS R12 the JInitiator is not certified or supported.

There is also a new version of database - 10g R2 available with Rapid Install for EBS R12 as well as a new tablespace model in R12 using a OATM tablespace structure.

Tasks to complete to ease R12 upgrade:

1. Upgrade EBS database to 10g R2

Oracle database release 10g R2 is required for EBS R12. Oracle release 10g R2 database is part of EBS R12 technology stack Since Oracle database 10g R2 is certified to run with EBS release 11.5.9 (without Demand Planning) and release 11.5.10 it is possible to upgrade to database release 10g R2 while your organization is still running EBS 11i. The latest certified 10g R2 database release - 10.2.0.3 with EBS 11*i*. Oracle database 9i has been de-supported. The premier support ended for database version 9*i* on 7/31/07. Oracle waived an Extended Support fee for 9*i* database from August 1, 2007 to July 31, 2008 for EBS 11i customers. In order to upgrade to 10g R2 database and continue to run EBS 11i please follow Metalink Note: Oracle Applications Release 11i with Oracle Database 10g Release 2 (10.2.0), Doc ID: 362203.1.

2. Convert tablespaces to OATM model

The OATM is the new tablespace model certified with EBS 11*i*. This feature is available out-of-the-box with 11.5.10 Rapid Install. All tablespaces for Oracle EBS R12 are also built using OATM tablespaces model. Once your organization converts to OATM model it will reduce a number of tablespaces from 2 per product to total of a 12 tablespaces (including 3 systems tablespaces: undo, system and temp) for all modules. The OATM supports locally managed tablespaces. All the database objects are mapped to tablespaces bases on: object size, life span, access methods and locking granularity. Once all your tablespace are converted to OATM it will ease maintenance and reduce space usages in EBS database. The OATM tablespace model supports RAC (Real Application Clusters). Oracle has introduced OATM Migration Utility to allow EBS Release 11*i* customers to convert tablespaces to a new tablespace model. In order to migrate to OATM customers must apply a standalone patch 3381489. This patch requires a prerequisite AD.H minipack (at the minimum, the higher version of AD minipack is recommended) and a minimum database version 9.2.0.4.

3. **Evaluate impact of R12 on customizations and extensions**

This step is a must preparation step for a successful R12 upgrade. The development team has to catalog all customizations deployed in production EBS R11i environment. As your

organization embarks on a new projects and implementation prior to R12 upgrade the development team has to keep in mind that the following technologies are disabled in EBS Release 12:

- "mod_plsql"

- Oracle Reports Server Reports

- Oracle Graphics Integration with Oracle Forms

- Oracle Applications Framework pages in AK repository

Please review Metalink Note: Preparing Custom Development for Next EBS Release, Doc ID: 374398.1. This note provides guidelines for developers and discusses techniques to get ready for development in an EBS R12.

4. Introduce XML Publisher and JDeveloper to your development team

In R12 HTML reports should be converted to XML Publisher, so start conversion early. In addition in EBS R12 the Reports Server is only accessible from Concurrent Manager, so all your html reports won't be able to utilize Reports Server engine. The general guidelines recommend that any Reports integrated with Oracle Graphics need to be re-implemented using XML Publisher. Oracle also recommends that your developers use JDeveloper release 10.1.3 for OA - Framework Personalization. The Oracle JDeveloper 10g with OA Extension - Patch 5856648 is available on Metalink and should be used to install and configure Oracle JDeveloper 10g with OA Extension.

5. Integrate Discoverer Server Release 10g with EBS 11*i*

Since the only supported version of Discoverer for EBS 11i and R12 is 10.1.2.0.2 you should plan to upgrade your Discoverer Server 4i to release 10g as soon as you can. Oracle Discoverer release 10g is certified to run with EBS 11i. Oracle Discoverer Server 4i has been de-supported on 10/31/06. The recommendation is to implement Discoverer 10g on a separate server. There are a known conflicts between Discoverer 4i and 10g Visibroker releases on the same server. For implementation steps and tasks on how to implement and configure Oracle Discoverer release 10g please review Metalink Note: Discoverer 10.1.2 with Oracle Applications 11i, Doc ID: 313418.1

6. Configure Oracle iAS Release 10g for external apps (SSO, OID, Portal) and integrate with EBS 11*i*

Please note that supported version of Oracle SSO and OID for EBS 11i and R12 is 10.1.2.0.2. This means you can implement Technologies External to EBS prior to the

upgrade to EBS R12 and preserve majority of your configuration tasks and setups. For implementation steps and tasks please review Metalink Note: Installing Oracle Application Server 10g with Oracle E-Business Suite Release 11i, Doc ID: 233436.1.

The supported version of Oracle Portal for EBS 11i and R12 is 10.1.4.0.0. This is also a project that you can tackle prior to starting upgrade to EBS R12 should your organization plans to integrate Oracle Portal technology with Oracle EBS. Once again majority of your configuration tasks and steps for Oracle Portal integration with EBS will be preserved during the R12 upgrade. For implementation steps and tasks review Metalink Note: Using Oracle Portal 10g with Oracle E-Business Suite 11i, Doc ID: 305918.1.

7. Position for high availability and scalability

As you are embarking on an Oracle EBS R12 upgrade project this is a perfect time to review architecture and configuration of your existing EBS 11i environment. In order to position your environment for scalability and to reduce maintenance cost plan to implement "shared appl tier" in your multi-node 11i environment. In order to complete configuration of a "shared appl tier" configuration please review Oracle Metalink Note: Sharing the Application Tier File System in Oracle Applications 11i, Doc ID: 233428.1 for implementation steps and tips.

One of the best methods to achieve a high availability for your database is to consider implementing RAC for your 10g R2 EBS 11i database. If you plan to use ASM feature of 10g R2 database, review Metalink Note: Configuring Oracle Applications Release 11i with 10g R2 RAC and ASM, Doc ID: 362135.1

8. Evaluate and complete platform change based on ROI

The crucial and always omitted planning step for each upgrade is to review existing hardware that supports your current Oracle EBS environment. The most likely your R12 EBS environment will require newer or upgraded servers.
Since a new hardware and upgrades to an existing hardware require time, it is necessary to evaluate existing hardware and complete capacity planning for R12 ahead of time.
If determined a new hardware is needed in order to support upgrade project and future R12 environment, evaluate options and consider migration of your existing EBS R11i to Linux OS. Over the past 5 years Oracle has developed a proven migration process to Linux. In order to migrate 9*i* database please review Metalink Note: 230627.1 or Metalink Note: 362205.1 if you plan to migrate 10g database. In order to migrate your EBS Release 11*i* applications please review Metalink Note: 238276.1