

Managing R12 EBS using OEM with the Application Management and Application Change Management Packs

John Stouffer

john.w.stouffer@gmail.com
www.justadba.com



John Stouffer

- Board Member 2010-2011, OAUG
- Oracle Certified ACE
- Oracle Databases Version 5+
- Oracle Applications Release 8+
- Specialist in Assessments, Upgrades and Client Advocacy

Presentation Objectives

- Learn about these standard Oracle Application tools to help lower your maintenance and administration costs of the highly complex Oracle E-Business Applications environment
- We will cover the features and functionality available in the most recent versions of the two available Application Management Packs that are enabled from the standard Oracle Enterprise Manager (OEM)

Administration and Maintenance Tools

- Oracle Enterprise Manager (OEM) - Free
- Oracle Applications Manager (OAM) - Free
- Application Management Pack (AMP) - \$\$
- Applications Configuration Management Pack (ACP) - \$\$

What is Lifecycle Management?

Lifecycle Management

- Lifecycle Management – install, maintain, monitor, manage and upgrade your E-Business Suite Applications
- Oracle provides a number of tools to help
- Some of the tools are included with your Application licenses (OEM and OAM)
- Management Packs Plug-ins for OEM (like AMP and ACP) cost extra

What is Oracle Enterprise Manager (OEM)?

Oracle Enterprise Manager (OEM)

- Oracle Enterprise Manager 10g Grid Control (10gR5)
- Monitor and manage end-to end EBS performance, availability and configuration changes
- Can monitor and manage multiple EBS environments and tools

What is Oracle Applications Manager (OAM)?

Oracle Applications Manager (OAM)

- A web-based EBS management tool
- Allows you to use maintenance utilities that used to be available only from the command line
- The main console is the OAM Dashboard
- System Administrators can check the status of an EBS instance's database, concurrent managers and other services, concurrent requests, and Workflow processes
- Can also manage initialization parameters and profile options
- Patch Wizard is available for free from OAM

Oracle Applications Manager (OAM)

- Recommended tool for making changes to AutoConfig
- Use License Manager to enable licensed E-Business Suite modules
- Monitors Jserv, Business Flow, Concurrent Manager, Runaway Forms Processes
- Includes Patch Advisor (Patch Impact R11i and 12) and Patch History - Use the most recent Patch Information Bundle
- Create your own System Alerts
- Tracks security issues, including Sign-on Auditing

- MetaLink Note: 387859.1 “Using AutoConfig to Manage System Configurations in Oracle E-Business Suite Release 12”

Oracle Applications Manager (OAM)

- Administer Concurrent Managers and Workflow components including Business Events
- Includes Diagnostic Wizards for Concurrent Manager Recovery, Service Infrastructure, GCS and Forms Monitoring, CP Signature, Workflow and Dashboard Collection Signature
- Provides a menu-driven system to set up, run and view Oracle provided Diagnostics

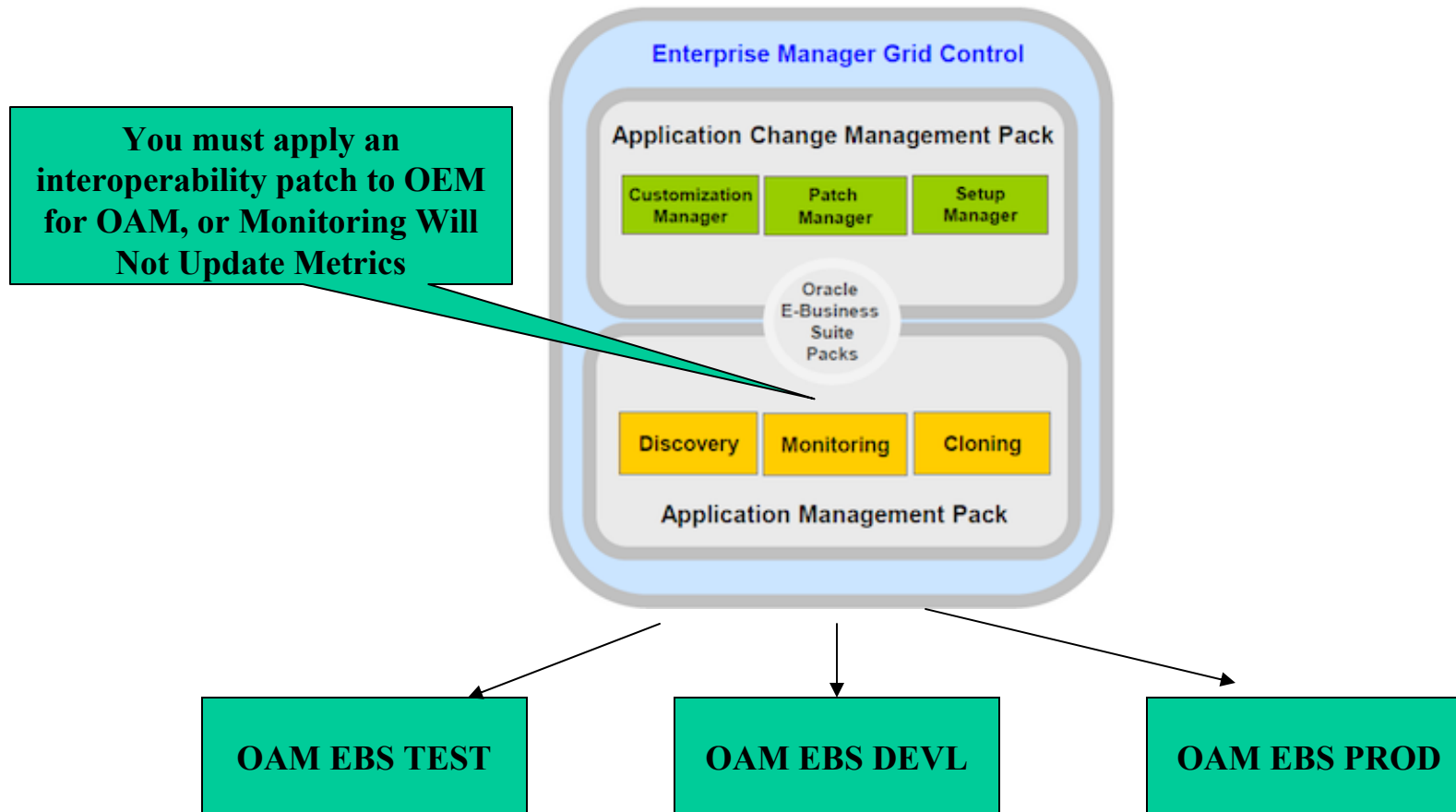
Oracle Applications Manager (OAM) – What’s New?

- Release 12.1.1 added Advanced Configuration Wizards that Enable/Disable:
 - HTTP load balancing - serves requests from clients and redirects them to multiple application tier servers.
 - SSL - communication between the client and server is in secure mode (https)
 - SSL Accelerator to reduce the SSL traffic and workload off the web servers.
 - Forms Socket Mode (R11i) and Servlet Mode (R12)

How Do OEM and OAM Work Together?

- OEM Grid Control allows you to monitor multiple Oracle E-Business Suite systems from a single console
- You can drill down into Oracle Applications Manager to control, configure, troubleshoot, and maintain individual EBS systems
- You need an interoperability patch on OEM to make AMP update information that comes from OAM

OEM + OAM + AMP + ACP



- Based on **Application Management Pack and Application Change Management Pack 3.1 Now Available** by Steven Chan, Oracle
- Also see **Application Change Management Pack for Oracle E-Business Suite An Introduction** by Ken Baxter, Biju Mohan, Oracle

What is Application Management Pack (AMP)?

Applications Management Pack (AMP) 3.1

- Extends Oracle Enterprise Manager 10g Grid Control to help monitor and manage EBS systems
- Integrates Oracle Application Manager with Grid Control to provide an end-to-end management solution
- Provides advanced features to monitor and manage EBS systems, including Cloning, Application Service Level Management, Extended Performance Metrics, Data Scrambling and links from Grid Control to OAM

Applications Management Pack (AMP) 3.1

- Discovery
- Monitoring
- Cloning
 - Data Scrambling

Applications Management Pack (AMP) 3.1 - Discovery

- Use OEM Grid Control to discover/register each database instance
- Use the Discovery Wizard dashboard to register each E-Business Suite instance
- The Discovery Wizard will by default enable discovery and monitoring of Workflow
- The Discovery Wizard will by default create an Oracle Workflow Service, Forms Service, SSA Service, Patching Information Object, Custom Objects, and Order Management Services

Applications Management Pack (AMP) 3.1 - Discovery

- Adds a new Oracle Applications tab under the Targets tab of Grid Control
- Apply the Oracle Applications Enterprise Manager interoperability patch to be able to drill down to OAM
- Set the Preferences global link in OAM or metrics won't be updated
- Discovers the Database Context and Applications Context
- Discovers Oracle Forms and JVM Usage for the Applications Context

Applications Management Pack (AMP) 3.1 - Monitoring

- Concurrent Processing Dashboard – provides a detailed overview of the **efficiency** of Concurrent Managers and Programs
 - Build a watch list of specific concurrent managers and concurrent programs
- End to End Tracing – analyze EBS database load
 - Trace top database sessions back to the EBS user

Applications Management Pack (AMP) 3.1 - Monitoring

- View and compare EBS instance configurations
- Products Installed
- New Internal System Alerts
- Patches Applied
- Site Level Profile Options Changed
- Context Files Edited
- Monitoring Host - you can drill down to the OEM Grid Control host

Applications Management Pack (AMP)

3.1 – Monitoring Service Level

- Application Service Level Monitoring
 - Define Service Models that represent business functions or applications in your enterprise
 - Measure the performance and availability of critical business functions
 - Receive alerts when there is a problem
 - Identify common issues and diagnose causes of failures.
 - Use to make sure you are meeting your Service Level Agreements

Applications Management Pack (AMP) 3.1 - Cloning

- Use OEM Grid Control to clone an EBS System automatically
- HOT mode cloning – clone without taking down the Source system
- Incorporate your custom DB cloning techniques into the Smart Clone routine
- Clone with Data Scrambling (Data Masking)
- Clone single or multi-node, RAC, shared APPL_TOP
- RAC to RAC; RAC to Non-RAC; Scale Down (Multi-Node to Single Node)

Applications Management Pack (AMP) 3.1 - Cloning

- Clone Status page shows status of all clone jobs (In Progress, Scheduled, Saved, Completed)
- You can add comments to the status of any clone job
- Clone Procedures – step-by-step interview process
- Procedures for cloning source to target include Advanced Clone and Simple Clone

Applications Management Pack (AMP) 3.1 – Cloning – Smart Clone

- Smart Clone - use a database target cloned using an **external solution** (EMC, NetApp FlexClone, certain IBM tools) as an input to the AMP cloning procedures
- Supports EBS advanced deployments:
 - Configure the single instance database
 - Configure the RAC database
 - Clone a single-node applications tier to a single-node applications tier
 - Scale-down cloning of a multi-tier applications tier **with** a shared file system node to a single-node applications tier
 - Scale-down cloning of a multi-tier applications tier **without** a shared file system node to a single-node applications tier

Applications Management Pack (AMP) 3.1 - Summary

- AMP monitors Applications Service, Oracle Applications Infrastructure Service, Concurrent Processing Service, Forms Applications Service, Concurrent Manager, Workflow, Custom Objects, Patch Information
- MOS Note: 982302.1: Getting Started with Oracle Application Management Pack and Application Change Management Pack for Oracle E-Business Suite Version 3.1
- MOS Note: 783188.1: Certified RAC Scenarios for E-Business Suite Cloning
- MOS Note: 846628.1, Interesting links about Applications Management Pack and Applications Change Management Pack for E-Business Suite
- Oracle Application Management Pack for Oracle E-Business Suite User's Guide Release 3.1, Part No. E14597-02

Application Change Management Pack (ACP)

Application Change Management Pack (ACP) 3.1

- Provides a centralized view to monitor and orchestrate changes (both functional and technical) across multiple Oracle E-Business Suite systems.
- Manage changes introduced by customizations, patches and functional setups during implementation and/or maintenance activities.
- Oracle Application Change Management Pack for Oracle E-Business Suite User's Guide, Release 3.1, Part No. E14530-02

Application Change Management Pack (ACP) 3.1

- Simplifies applying changes – patches, setups, customizations - across multiple Oracle E-Business Suite systems
- Improves user productivity by automating change deployment
- Standards-based change deployment framework reduces human errors
- Notifies specified users of updates
- Provides a change approval mechanism

Application Change Management Pack (ACP) 3.1*

- Customization Manager
- Patch Manager
- Setup Manager

* AMP is a prerequisite pack for ACP

Application Change Management Pack (ACP) 3.1

- **Customization Manager** – monitor and manage E-Business Suite changes
 - Register new custom applications
 - Track and validate existing custom applications in a standard way
 - Report on a single package, compare two packages, or compare a package against an instance
 - Integrates with most source control systems
 - Change approval framework provides audit trail
 - Validates customized code against software coding best practices
 - Packages changes so they can be applied like any other Oracle application patch include CPU PSUs for the Applications (introduce in January quarterly CPU)

Application Change Management Pack (ACP) 3.1

- **Patch Manager**
 - Automates applying application patches across multiple instances
 - Allows scheduling application patch application
 - Allows comments in the Patch Run Details – Patch Run Name, Description, Justification, Requester, Notification E-mails
 - Recommends application patches, provides details about what a patch will change, and shows what patches have modified a specific file
 - Prerequisite Patch Impact Analysis – determines if there are prerequisites, allows adding prerequisites to the patch job if they aren't already available - Patch Information Bundle
 - Integrated with Customization Manager
 - Integrated with MOS to download patches

Application Change Management Pack (ACP) 3.1

- **Setup Manager** – next generation of *iSetup*
 - Extract and load data from one E-Business Suite instance to another
 - Use “Projects” to control sequence of load, schedule timing of load, manage simultaneous loads to multiple instances
 - Offline Transformation – users can download setup data into Excel, edit or add to it, and upload it
 - Extends iSetup by working against multiple Oracle E-Business Suite instances

What Can You Do *Without* the Management Packs?

- Customization – Follow your company’s current procedures for how to design, test, and roll out customizations.
- Patching – You can research and apply patches using OAM
- Setup – Migrate setups using iSetup or other third-party tools
- Monitoring – OAM comes with a number of seeded monitoring metrics for an individual instance, including New Internal System Alerts, Patches Applied, Patch Wizard, Site Level Profile Options Changed, and Context Files Edited metrics
- Cloning – Oracle has provided cloning procedures (including Data Scrambling) that are well-tested and continue to be enhanced

What *Can't* You Do Without the Management Packs?

- You can do all the things that the Management Packs support - Customization, Patching, Setup, Monitoring, Cloning – but...
 - The devil is in the details – it is easy to lose track of where a customization has been applied or whether a setup has been correctly cascaded. And going back several years to prepare to migrate customizations, when it's time to do an upgrade, can be a formidable task.
 - Oracle is providing a supported framework and toolset that allow you to manage your applications more easily, with an audit trail, reporting features, and the ability to compare and contrast multiple EBS environments more easily in an automated fashion to reduce overall maintenance costs.

What *Can't* You Do Without the Management Packs?

- Automated framework and packaging methodology eliminate manual work and make processes more productive and efficient
- Cloning automation of manual process – very little operator involvement
- Outside of AMP, Metric Collection, Comparison Reporting, and the ability to see all your environments from inside Grid Control does not exist and does not have the Oracle proprietary information needed to support highly complex EBS application stacks

What *Can't* You Do Without the Management Packs?

- There are also certain things that you can only do with the Management Packs...
 - Integrated Customization Management
 - Automated Service Level Management
 - Automated Cloning using a supported toolset, rather than scripts or manual procedures
 - Automated Change Control Notification
 - Apply your customized patches just like you apply EBS patches

Are There Any Issues With the Management Packs? - AMP

- No direct path to Version 3.1 - Install 3.0 first, then upgrade to 3.1
- MOS Note: 812294.1, Troubleshooting Guide and Known Issues List for the Oracle Application Management Pack for Oracle E-Business Suite, Release 3.0 – VERY USEFUL
- Cloning is a complicated process and there are several issues – check MOS Note: 812294.1
 - Verify Pre-requisites – most failures to discover are due to missing pre-requisites – be sure you are on the latest version of OEM, AutoConfig, RapidClone, AMP and interoperability patches
 - Rediscovery can fail if a first attempt failed, leaving partial setups
 - Test with RapidClone first before trying AMP Clone
 - Before Cloning, refresh AutoConfig on all nodes

Are There Any Issues With the Management Packs? - **AMP**

- Is AMP cloning stable??? Yes – the product has been around for 2 ½ years
- Why is cloning such a big deal? Because we ask so much of it
 - Number of topologies supported – there are so many different ways to configure systems: RAC, hot/cold cloning, the ability to scale down (multi-node to single node)
- AMP has matured greatly, with increased platforms supported, different ways customers can incorporate their own scripts, and support for third party products like EMC, IBM and NetApps

Are There Any Issues With the Management Packs? - **ACP**

- MOS Note: 829450.1, Known Issues with the Oracle Application Change Management Pack for E-Business Suite – these have fixes or simple ways to avoid the problem
 - Archive Mode Does Not Automatically Revert after Patching with Option "Disable Archive Mode"
 - Patch Manager Lets You Apply a Patch to R12 and R12.1 Simultaneously (it shouldn't) and allows the ability to submit an R12 Patch Against an R12.1 Instance (it will fail)
 - Package Creation Fails When Using NFS Mount Points as a Temporary Stage Directory (Patch 8596036)
 - Package Creation Fails on HP-UX PA-RISC (64-bit) (Patch 8586885)

Are There Any Issues With the Management Packs? - **ACP**

- Patch Manager will fail if there are multiple Oracle E-Business Suite instances owned by the same user on the same machine –
Simple Solution: Don't Do That!
- Best Practice: Each E-Business instance's files and database are owned by a single user account with the SID embedded in the account name (e.g. oaprod, oatest)

What Do AMP and ACP Cost?*

- \$7000/CPU

or

- \$140/Named User

* Check Oracle's Posted Pricing Guide as prices do change

Are the Management Packs Worth the Extra Money?

- The Applications DBA and Applications System Administrator's jobs are very complex and require attention to detail and, often, managing multiple tedious but necessary tasks
- Anything you can do to automate tasks and leave an audit trail is well worth considering
- With these tools in place, your *next* DBA or SA will have a better view of the history of changes and setups and may not have to recreate or invent tools to handle tasks that should be automated already

Links

- <http://blogs.oracle.com/chan> - Steven Chan, Director of Applications Technology Integration for Oracle – wonderful articles explaining the nuances of the Applications - THE ORACLE APPLICATIONS BLOG
- www.Integrigy.com – E-Business Suite Security, including CPU vulnerability evaluation
- <http://orclville.blogspot.com> – Floyd Teter’s Fusion perspective from the trenches
- www.OnCallDBA.com – E-Business Suite books, assessment and concurrent manager expertise
- www.justadba.com – that’s us!

Questions and Answers

John Stouffer

john.w.stouffer@gmail.com

www.justadba.com



Thank You!