A Technical Roadmap for Oracle Fusion, E-Business Suite Release 12 and Oracle Fusion Applications

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The Road to Fusion is Paved With Good Direction

Many companies who have purchased best of breed applications solutions over the years find themselves facing a difficult problem - should they keep each product as a separate entity, or is there a way to integrate the products, choosing the best qualities of each while taking advantage of new features and technology advancements? The answer, of course, is what we will be discussing in this paper. This paper describes a technical roadmap that shows how Oracle Fusion Middleware, the E-Business Suite Release 12, and Oracle's Fusion Applications will fit together. By understanding how these three pieces work together, you can plan your organization's strategy for dealing with Fusion.

Terminology

What is Fusion Middleware?

Oracle's Fusion Middleware offers a full suite of tools for building a service-oriented architecture. These tools are standards-based and take advantage of leading edge technology solutions. These software tools enable different applications to work together, even if they weren't originally designed to do so. Fusion Middleware tools are based on a modular architecture and follow industry standards.

Oracle calls Fusion Middleware "hot-pluggable", which means customers will be able to protect their current investments in technology and still have long-term flexibility. For example, for those customers who have invested in Microsoft SharePoint, Oracle's hot-pluggable Oracle Content Management will allow users to continue to use the SharePoint interface that they've become accustomed to, while also searching and browsing for Oracle Universal Content Management files – all from within the SharePoint interface.

What is E-Business Suite Release 12?

Oracle's E-Business Suite Release 12 is Oracle's latest version of their business applications. Not all E-Business Suite customers are running this latest release – Oracle has customers still using Releases 10.7/11.0 (though hopefully not many), and a lot of customers are running on various point releases of Release 11*i,* Release 12's predecessor. Oracle also supports customers running other business applications, including the JD Edwards, PeopleSoft and Siebel product lines.

What are the Fusion Applications?

The Fusion Applications will unify best-of-breed capabilities from all Oracle Applications in a complete suite delivered on Oracle's open technology. For those of us who only support the E-Business Suite of Applications, when Oracle says "all Oracle Applications", they mean the JD Edwards EnterpriseOne, JD Edwards World, Oracle E-Business Suite, PeopleSoft and Siebel product lines.
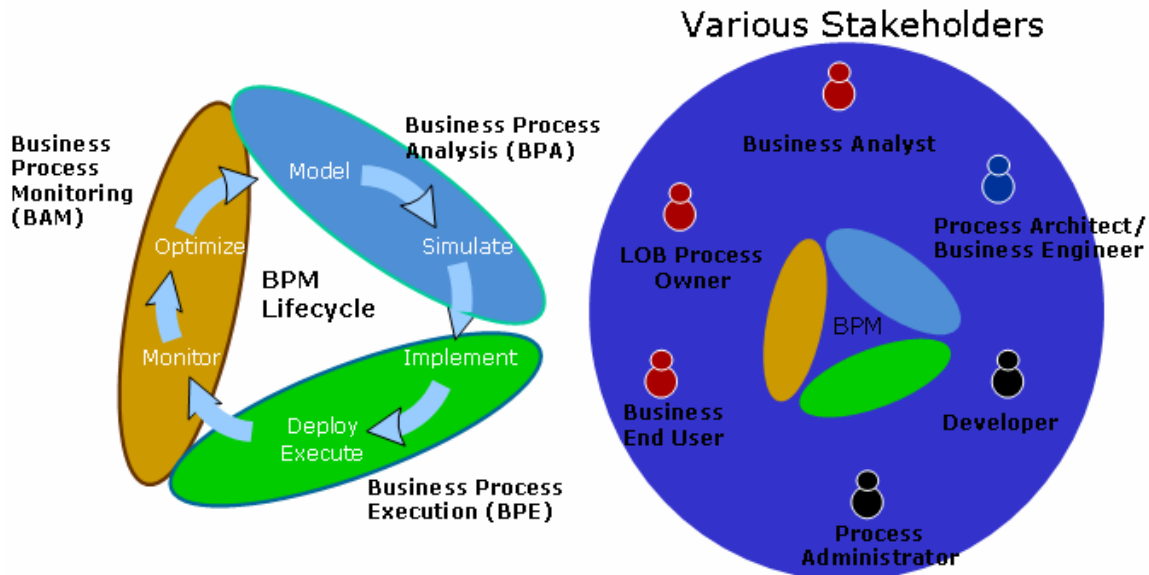
These new applications will focus on end-to-end business processes like Order2Cash, Procure2Pay, and Hire2Retire. They will provide more cost effective integration, flexible business processes and extensibility and they will fuse processes, people, and products to leverage the best parts of each. The Fusion Applications will embrace a service-oriented and standards-based information architecture.

Fusion Application Design Principles

The application design principles for Fusion are straightforward. First, Fusion Applications must improve business insight by offering real-time operational analysis to enable taking action. They will accomplish this by using Oracle's Event Driven Architecture, BI Tools, and Dashboards. Second, the Fusion Applications must mirror Adaptive Industry Processes to make it simpler to integrate and customize the applications to match your business requirements. They will accomplish this by using Service-Oriented Architecture (SOA) and Business Process Management (BPM). Finally, the Fusion Applications must provide a better ownership experience. Oracle's goal is to provide applications that allow zero downtime and increased automation. To do this, Oracle is investing heavily in lifecycle management.

Focus on Business Process Management and Improvement

With Business Process Management (BPM), the various stakeholders, from business analysts to developers to end users can work together to make process improvements using existing applications. Business Process Analysis (BPA) tools simulate business and process models before implementation using real customer data. Business Process Execution (BPE) tools allow customers to implement new processes and then monitor and optimize those processes using Business Process Monitoring (BAM) tools.

Fusion Middleware is the "Enabler"

Oracle has coined the term "the Fusion Effect", and defines it as the sustainable competitive advantage achieved by continuous blending of business insight and adaptable processes. This effect depends on Fusion Middleware and its family of more than 40 software products. Fusion Middleware leverages the Oracle Application Server 10*g* (the 11*g* Application Server is currently in beta testing) and takes advantage of software from many Oracle acquisitions. Of course, Fusion Middleware is built on industry standards, which is what makes it so flexible and adaptable.

Fusion Middleware Areas

Fusion Middleware solutions address several areas, including Development Tools, User Interaction, Business Intelligence, Integration and Process Management, the Application Server, the Grid infrastructure, Systems Management and Identity Management:

Fusion Components to Know

Application Integration Architecture
Reduced TCO through sustainable integrations

BI Intelligence
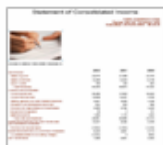Insight provided within the context of operational systems

Event Driven Architecture
Provide real-time feedback on business processing

Service Oriented Architecture
Building adaptable application logic

Master Data Management
Consolidate and leverage master data

Identity Management
Managing Information access and sharing

Applications Integration Architecture (AIA)

Oracle's Applications Integration Architecture (AIA) provides an open standards based framework for creating cross-application business processes that support the way you run your business today, while paving the way for your long term, strategic business transformation plans. Powered by Fusion Middleware, the AIA includes a pre-built SOA Integration Layer for BPEL. Best Practice Processes are represented as abstract models and extensible execution flows. Enterprise Business Objects provide a standard definition of business objects. Enterprise Business Services provide a common service definition. Best of Breed Application Service Components provide logic and data. Hubs are used to Consolidate Key Entities to a common definition.

The AIA components are the Foundation Pack, the Process Integration Packs and the Industry Reference Models. The *Foundation Pack* leverages SOA (Service-Oriented Architecture) to allow customers to create custom process integrations more quickly and cost-effectively than traditional approaches. The *Process Integration Packs* provide flexible out-of-the-box process integrations that can be easily extended and

evolved as business requirements change. Oracle's Industry Reference Models provide customers with tools and documented business process flows to adapt to specific marketplace requirements by using industry best practices.

This architectural model provides an open, standards-based architecture that accelerates time-to-value. The model provides pre-built, sustainable integrations to reduce implementation risk and cost. The extension framework protects your investment from upgrades. Documented best practice reference models help you optimize business operations. The application independent design makes it easy to plug and play new applications, including the Fusion Applications.

Business Intelligence Tools

Business Intelligence (BI) is the process of getting information about your business from available data. Oracle provides a number of different BI tools, including:

- Oracle Business Intelligence Enterprise Edition (OBIEE) – formerly Siebel Analytics, OBIEE is a comprehensive suite of enterprise BI products that deliver a full range of analysis and reporting capabilities

- BI Publisher – formerly XML Publisher, is an enterprise reporting solultion that allows users to create, manage and deliver all kinds of highly formatted documents

- Oracle Discoverer – use this tool for creating and maintaining a business-oriented view of relational data

- Business Activity Monitor (Dashboards) – allows executives to monitor key business services and processes and to quickly make changes in business process to take corrective action

- Oracle Business Intelligence Warehouse Builder – use this tool to design, implement and maintain a data warehouse environment and the metadata for building reports

- Daily Business Intelligence – a set of reporting and analylsis applications that deliver accurate, timely, actionable information to executives, managers and front-line workers

Event Driven Architecture (EDA)

Oracle's Event Driven Architecture (EDA) is built into the Fusion Middleware products. It allows customers to monitor, analyze and respond to business events and requires minimal coding to do so. Creating a new user, for example, might create a business event that triggers emailing the new user a user guide, or shipping a security token, or scheduling training. EDA is designed to control Workflow, and does so by working outside the Application Suites. EDA leverages Business Activity Monitoring (BAM) and uses Enterprise Messaging (JMS). Best of all, EDA will be interoperable with non-Oracle applications, providing a tremendous amount of flexibility for customers.

Service Oriented Architecture (SOA)

A Service Oriented Architecture (SOA) implements applications as a small series of building blocks, each of which performs a discrete step or function. These blocks are then combined using another software component to create a complete application. By building this solution in a Java Enterprise toolkit, it is possible to create a solution that is based upon vendor-neutral standards, has the potential to interoperate with other applications, and can exploit Grid Computing to its best potential.

Master Data Management (MDM)

Master Data Management (MDM) tools allow customers to consolidate/federate master information from disparate systems and business lines into one repository. Users can cleanse and enrich data centrally, and distribute data as a service from a single point of truth to consuming applications, enterprise business processes and decision support systems.

Identity Management Components

Identity management solutions act as the security backbone for Oracle Fusion Middleware. These tools assist with administration, configuration management, provisioning, end-to-end monitoring, service level management and security capabilities. Identity Management Components provide a centralized console that manages and monitors both Oracle and non-Oracle products. Tools include:

- Web Access - Oracle Access Manager

- Provisioning - Oracle Identity Manager

- Federation - Oracle Identity Federation

- Password Synch - Oracle Identity Manager

- Virtual Directory - Oracle Virtual Directory

- Meta-Directory - Oracle Directory Integration Platform

- Directory - Oracle Internet Directory

- Authentication/PKI - Oracle Certificate Authority

- Web Services - Oracle Web Services Manager

- Enterprise SSO - Oracle Enterprise Single Sign-On Suite

E-Business Suite Release 12

E-Business Suite Release 12, which was released in January, 2007, is the latest version of the E-Business Suite Applications offered by Oracle. The current point release for R12 is Release Update Pack 12.0.4. It is about 60% Java based, compared to its predecessor, Release 11i, which is only 40% Java based. Release 12

already has incorporated some of the Fusion Middleware products that are available today. Unlike Release 11i, Release 12 makes extensive use of XML.

Oracle's goals with Release 12 are to allow customers to:

- Think Globally – Get a global view of their world using real-time operational reporting and global financial consolidation

- Work Globally – Use global processes, including Oracle's new SWAN interface, the financial shared services delivery model, and new human resource localizations

- Manage Globally – Customers can reduce costs by taking advantage of new web services repository and maximizing their use of Fusion Middleware

- Extend and evolve to the next generation by using standards-based SOA technology

If you want to upgrade to the Fusion Applications when they become available, you must be running either Release 11.5.10.2 or Release 12.

Oracle Applications Unlimited

Oracle offers three types of support, Premier, Extended and Sustaining:

Premier Support includes certification with new third party products/versions and Oracle products.

Extended Support provides certification with most *existing* products instead of new third party products/versions and Oracle products. Extended Support may not include certification with some new third-party products/versions. If you're still running Oracle 9*i* and have purchased extended support from Oracle, then if you find a new problem with an existing certified configuration, Oracle will help you resolve the problem. Just keep in mind that Extended Support for Oracle 9*i* ends in July 2010.

Extended Support, by the way, costs more than Premium Support. For the first year of Extended Support, it costs 10 percent more. For the second, it's 20 percent, and for the third, it's 30 percent more. Extended Support only lasts for three years, so after that if you choose not to upgrade, you move to Sustaining Support.
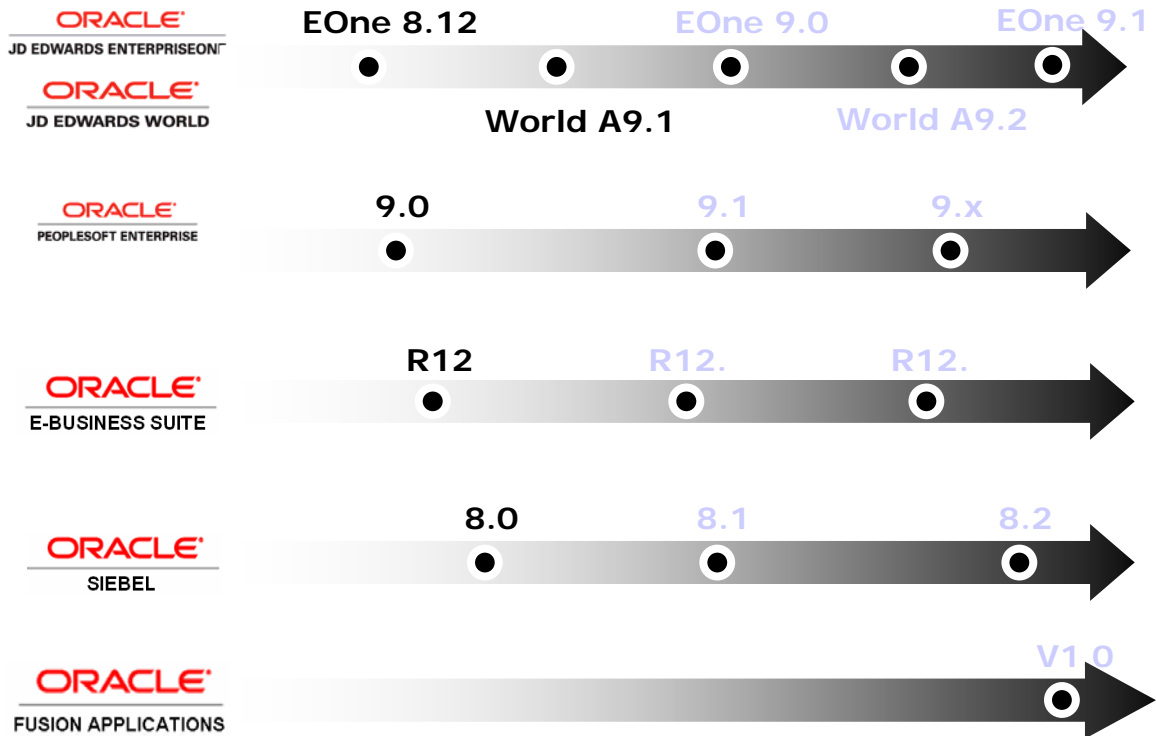
Sustaining Support does not include new updates, fixes, security alerts, data fixes and critical patch updates; new tax, legal and regulatory updates; new upgrade scripts; certification with new third-party products/versions; or certification with new Oracle products. If you have a question and there's already an answer on MetaLink, Oracle Support will point you to it. If you're still running Release 11.0.3, you're on Sustaining Support (which ends Jan 2009).

The following chart shows type features that are included in each support level:

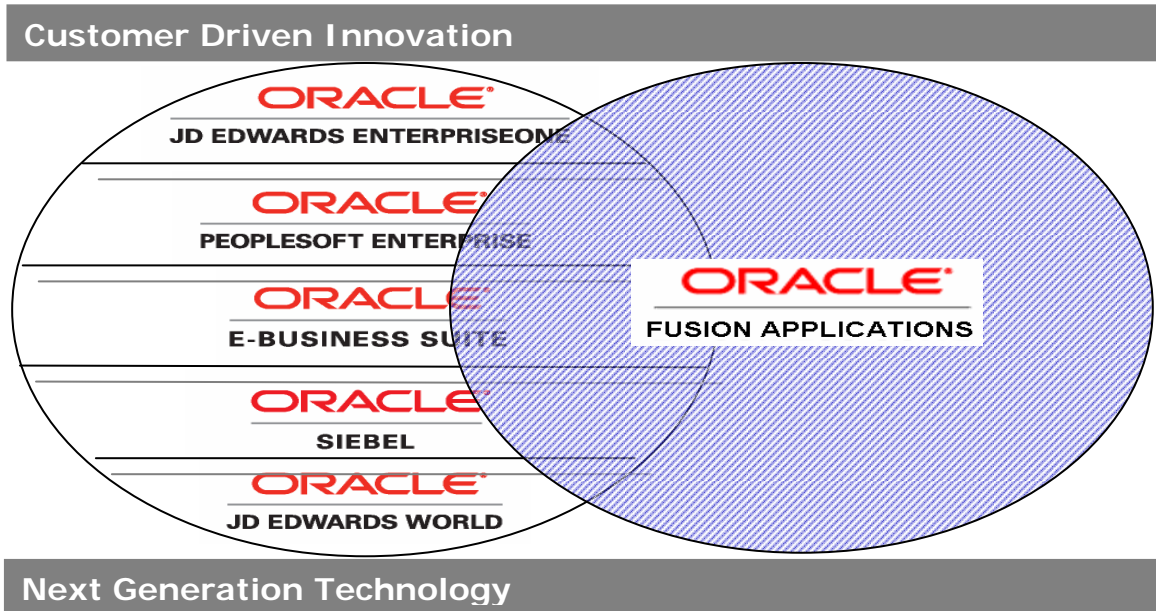| Key Feature	Premier Support (5 Years)	Extended Support (3 Years)	Sustaining Support (Infinite)
Major Product and Technology Releases	●	●	●
Technical Support	●	●	●
Access to Support Portal	●	●	●
Updates and Fixes	●	●	**Pre-existing**
Security Alerts	●	●	**Pre-existing**
Upgrade Scripts	●	●	**Pre-existing**
Critical Patch Updates	●	●	
Tax, Legal, and Regulatory Updates	●	●	
Certification with Existing third-party Products/versions	●	●	
Certification with most new Oracle products	●	●	
Certification with most new third-party products	●		

Applications Roadmap Overview

The following chart shows the upgrade paths for Oracle's different product suites:

How the Fusion Applications Fit In

You might say that the Fusion Applications will be just another Applications product line, just like JDE, EBS, PeopleSoft and Siebel are product lines. Customers can choose an end to end solution based on one product line, or they can take a best of breed approach with components for each. For example, a customer could integrate E-Business Suite Financials with PeopleSoft Human Resources and Siebel CRM. It is Fusion Middleware that all customers will use, regardless of the applications product line they choose.

The Road to Fusion - Roadmap Concepts

We leave you with the following recommendations for preparing for Fusion:

- Pick Your Fusion Applications "Jump-off Point" – for E-Business Suite, you must be running either Release 11.5.10.2 or Release 12. If you are not running one of those releases and want to migrate to the Fusion Applications when they become available, you will have to upgrade first.

- Upgrade to Your "Jump-off Point" as soon as possible.

- Upgrade to Oracle Version 10g as soon as possible.

- Implement Standard NAS/SAN Utilities for Snapshots

- Implement Standard Oracle Utilities like Oracle Enterprise Manager with with the Applications Management Pack (AMP)

- Stay Current on your "Jump-off Point". You'll need to stay current on the ATG Release Update Pack, year-end patches, and Critical Patch Updates (CPUs).

- Evaluate and document your customizations. Determine what customizations you have, map them to Applications functionality and decommission customizations where possible if the Applications provide the same functionality. You'll want to convert customizations to Fusion technology-based solutions where decommission is not possible. As an example, since we know that Workflow will be replaced by BPEL for the Fusion Applications, now is the time to learn BPEL. Any existing workflow customizations – or new ones – should be written using BPEL.

- Start Leveraging Your Available Fusion Tools. Fusion is already here! Fusion tools that can already be used with the E-Business Suite include XML (BI) Publisher, the SOA Suite and WebCenter, and Business Intelligence tools like OBIEE or DBI and Discoverer 10g.

Conclusion

There is no lack of communication on Oracle's part as to where the Applications are going in the next few years. With what you know about Oracle's Applications Unlimited support offerings, you can plan your migration to the Fusion Applications today. The Fusion Middleware tools are already here, so you can begin learning to use them now, rather than wait until you have no choice.

Other Links

- http://blogs.oracle.com/shan - Steven Chan, Director of Applications Technology Integration for Oracle – wonderful articles explaining the nuances of the Applications

- 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 and concurrent manager expertise

- www.trioragroup.com – that's us!

About the Author

John Stouffer has more than 18 years' experience with Oracle database administration and more than 14 years' experience supporting Oracle's E-Business Suite Applications environments, including architectural design, installation, implementations, upgrades and system assessments in the federal, public and commercial industries. John is an Oracle ACE for his contributions in the area of Oracle Fusion Middleware. John chairs the OAUG Upgrade SIG, was the founding chair for OAUG's Fusion Council and actively participates in other GEO and SIG activities.

About Triora Group LLC

The Triora Group ensures that Oracle E-Business Suite customers get the highest value from their investment in Oracle products. Our staff has an average of over 10 years of Oracle Applications and Database experience. We take a holistic view of the Oracle environment, providing expertise with the Applications, Application Server, Middleware and Database.

We also assist customers with implementing Real Application Clusters, Security, Disaster Recovery solutions, Information Life Cycle Management, Application Integration Architecture and Service Oriented Architectures.