Demystifying Oracle Fusion

This article will introduce Oracle DBAs and Developers to the fundamentals of the Oracle Fusion Technical Platform.

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- Changing Skill sets for Oracle DBAs

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The skills sets required to be an Oracle Developer are changing significantly.

Developers who know Oracle Forms, Reports, Discoverer and PL/SQL are going to need to enhance their skill set to support new Internet development environments and Oracle Fusion applications.

It is important for Oracle developers to understand the skill sets and expertise they are going to need to be marketable in Internet development environments and the upcoming Oracle Fusion application environment.

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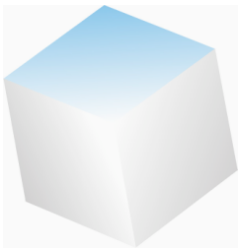
This article will introduce the technologies surrounding Oracle Fusion and help readers understand why expertise in these areas are going to be a required skill set for upcoming Internet development projects.



This article will teach you enough about Oracle Fusion so if you are at a social event this weekend and people are talking about Oracle Fusion you will know enough to join in or you will know enough to walk away.

Oracle Fusion

Oracle Fusion Terminology:

- **Oracle Fusion** is the integration of Oracle applications such as E-Business Suite, PeopleSoft, JD Edwards, Siebel, Retek, Stellent, etc. into a set of next generation applications based on open industry standards. This set of next-generation applications will be based on the Service Oriented Architecture (SOA).
- **Oracle Fusion Middleware** is the underlying technical platform used to build Oracle Fusion applications. This is also referred to as the Oracle Fusion Technical Platform.
- **Oracle Fusion Architecture** is the blueprint that ties together the Oracle applications, middleware platform and grid technology.

Over time certain technologies have risen to the top that have the ability to meet the challenging demands of Internet development environments. Oracle has selected these technologies as the technical foundation for Oracle Fusion.

Key technology components developers need to learn independent of vendors:

- Java 2 Enterprise Edition
- Web Services
- Object Relational Mappers
- Service Oriented Architecture
- eXtensible Markup Language
- Security Assertion Markup Language
- Business Process Execution Language
- Java Frameworks and Design Patterns

Oracle products offer a very robust integrated solution supporting Java and Web technologies. Some of key products include:

- JDeveloper
- TopLink
- Application Development Framework
- BPEL Process Manager and eBusiness Suite
- SOA Suite
- Identity Management Suite
- BI Suite, Web Center and
- Oracle Portal
- Single Sign-On
- Grid Control

This technical foundation is based on proven industry standards. Defining this technical foundation is helping Oracle customers understand the skill sets their teams will need to support current and future Oracle applications.

These technologies can be a big challenge for developers who have been working with Oracle Forms, Reports, Discoverer, PL/SQL, Visual Basic, PowerBuilder and similar development environments.

The ability to quickly build composite Internet applications is very important to a lot of organizations. This can significantly reduce costs and time to market. The ability to have a high degree of reuse is also an important key for this. The tools we've listed have become a popular way to achieve these results.

Oracle Fusion Components

The following are high level definitions of key technical components of Oracle Fusion.

- Oracle JDeveloper - This Integrated Development Environment is the base development platform used by Oracle developers to build Oracle Fusion applications. JDeveloper contains interfaces for development with J2EE, SQL, PL/SQL, HTML, Web Services, SOA, JSF, ADF, etc. This IDE should be looked at as a development environment for developing database and Internet applications.
- Java 2 Enterprise Edition (J2EE) - J2EE is an industry standard for developing enterprise multi-tiered applications. J2EE is an architecture and framework for enterprise wide applications. J2EE applications include JSPs, JSFs, ADF Faces, EJBs, etc.
- Oracle Application Development Framework (ADF) - ADF is a J2EE development framework that is based upon best practice design patterns for building Web applications. ADF is based upon the Model-View-Controller that separates User Interface, Business and Data logic. J2EE frameworks can be complex and it can be difficult to determine how to organize different components. ADF helps organize J2EE components into a well organized Web application. ADF Faces provides a Web user interface similar to the Oracle Forms and Reports interfaces.
- TopLink - TopLink is an Object Relational mapper that manages the communication between Java (object-oriented) applications and the Oracle database (relational).
- XML - XML has become the universal language for transmitting data structures independent of the environment. J2EE, Web Services, SOA and BPEL use XML.
- Web Services - Web (software) Services uses XML standards and transport communication protocols to exchange data between applications. Web services allow different types of applications to communicate. Web services are standards that define the semantics for how software communicates.
- Service Oriented Architecture (SOA) - SOA is an architecture that defines how loosely coupled software services communicate with each other. SOA increases reusability, that allows different software services to identify and communicate with each other.
- Business Process Execution Language (BPEL) - BPEL is a standard for organizing reusable web services into more than one type of process flow.
- Identity Management - Identity Management provides enterprise management of user identities across resources inside and outside the firewall.
- Single Sign-On (SSO) - SSO provides unified authentication allowing a user to logon once and SSO will manage single sign-on capability across applications.
- Grid Control - Oracle Enterprise Manager provides administration across the database and all middle tiers. Grid Control provides monitoring of databases, application servers, web services and applications.

Conclusion

Oracle Fusion tools are going to hide developers from a lot of the technical complexity behind Oracle Fusion. However, dependent upon the customizations made to Oracle Fusion applications, developers may need a strong understanding of the technical components of Oracle Fusion.

There are three types of developers that need to learn the products in the Oracle Fusion Technology Platform:

- Traditional Oracle Developers - Developers that have used Oracle Forms, Reports, Discoverer, PowerBuilder, Visual Basic, C/C++, etc. are going to need to learn the technologies supported in Internet development environments. Most Oracle developers are going to have to be knowledgeable with some or all of these technologies.
- Traditional Oracle Apps Developers - If you are a developer who has customized Oracle, Siebel, PeopleSoft, JD Edwards, Retek, Stellent and you are not likely to hit the lottery jackpot, then learning the Oracle Fusion Technology Platform is in your future.
- Internet Developers - Developers building Internet applications are likely to work with some or all of the products we have discussed in this article. Internet developers may be working with Eclipse instead of JDeveloper, or Hybernate instead of TopLink or WebSphere instead of the Oracle Application Server. However the principles of Frameworks, ORMs, Design Patterns, J2EE, Managing Web Services, XML and SOA are still going to be technical areas that need to be understood. A consistent layout and look and feel is provided by Oracle.

It is important to understand that components such as J2EE, Web Services, XML, SOA, etc are not just tied to Oracle. They are based on open standards. Skills in the technology discussed in this article are incredibly valuable in any Internet development environment.

These open standard components are moving into your future like a freight train. They require skills that are going to be incredibly marketable and valuable in the future.

This article was written by George Trujillo at Trubix Inc. *Think Fusion, Think Trubix*, www.trubix.com a company specializing in Enterprise training solutions for Oracle, SQL Server, Linux, Java and middle-tier (Fusion) technologies.
George Trujillo:

- Has over 18 years of Oracle development experience with Oracle Forms/ Reports, Discoverer, C, C++, Pro C, Java and .NET.
- Is on the Independent Oracle Users Group Board of Directors.
- Is on the International Oracle Fusion Council.
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