SOA & The Agile Enterprise

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Oracle Corporation
“A service-oriented platform into which we can very easily plug both newly developed and existing IT systems, is a very attractive value proposition.”

Michael Herr, Senior Director of IT, Deutsche Post

“Our industry is very competitive. My team is constantly looking for ways to improve customer service, introduce new product offerings, and make an impact to the bottom-line.”

Serge Bauve, Manager, Belgacom
Today’s Challenges

- Changing Business Requirements
- Emerging Technologies
- Growing Complexity

SOA – Blueprint For Success
Service-Oriented Architecture

User Interfaces
JavaServer Faces

Device
View
Controller

Render Kit
JSF/JSP
JSF/Struts
Oracle and JavaServer Faces

• Key contributor to JSF Expert Group
• Contribute components to Apache MyFaces
• Lead Eclipse JSF project
• JSF in JDeveloper and Oracle Application Server
• 100+ Faces components

http://www.oracle.com/technology/jsf

DEMONSTRATION

JavaServer Faces
Business Logic
Enterprise JavaBeans 3.0

Device
- Renderer

View
- JSF/JSP

Controller
- JSF/Struts

Model
- EJB 3.0

EJB 2.1 Bean Class

```java
public interface Calculator extends EJBObject {
    int add (int a, int b) throws RemoteException;
    int subtract (int a, int b) throws RemoteException;
}

public interface CalculatorHome extends EJBHome {
    Calculator create() throws CreateException, RemoteException;
}

public class CalculatorBean implements SessionBean {
    private SessionContext ctx;
    public void setSessionContext(SessionContext s) { ctx = s; }
    public void ejbCreate() {}
    public void ejbActivate () {}
    public void ejbPassivate () {}
    public void ejbRemove () {}

    public int add (int a, int b) { return a + b; }
    public int subtract (int a, int b) { return a - b; }
}
```
EJB 2.1 Bean Class

```java
public interface Calculator extends EJBObject {
    int add (int a, int b) throws RemoteException;
    int subtract (int a, int b) throws RemoteException;
}
public interface CalculatorHome extends EJBHome {
    Calculator create() throws CreateException, RemoteException;
}
public class CalculatorBean implements SessionBean {
    private SessionContext ctx;
    public void setSessionContext(SessionContext s) { ctx = s; }
    public void ejbCreate() {}
    public void ejbActivate () {}
    public void ejbPassivate () {}
    public void ejbRemove () {}
    public int add (int a, int b) { return a + b; }
    public int subtract (int a, int b) { return a - b; }
}
```

EJB 3.0 Bean Class

```java
@Stateless public class CalculatorBean implements Calculator {
    public int add (int a, int b) { return a + b; }
    public int subtract (int a, int b) { return a - b; }
}
public interface Calculator {
    int add (int a, int b);
    int subtract (int a, int b);
```
**EJB 2.1 Deployment Descriptor**

```xml
<session>
  <ejb-name>CalculatorEJB</ejb-name>
  <home>com.example.CalculatorHome</home>
  <remote>com.example.Calculator</remote>
  <ejb-class>com.example.CalculatorBean</ejb-class>
  <session-type>Stateless</session-type>
  <transaction-type>Container</transaction-type>
</session>
```

**EJB 3.0 Deployment Descriptor**

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**Oracle and EJB 3.0**

- Expert in persistence through TopLink
- Co-Specification Lead for EJB 3.0
- TopLink Essentials Contributed to Glassfish as EJB 3.0 Persistence RI
- Lead Eclipse EJB 3.0 project
- EJB 3.0 in JDeveloper and Oracle Application Server

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[Oracle and EJB 3.0](http://www.oracle.com/technology/ejb3)
Service-Oriented Architecture
Integrate Services

Publish Services

Framework

WSIF

In Memory | REST | JCA | COM+ | SOAP

Java | Yahoo! | SAP | .net | Oracle
Integrate Services

Enterprise Service Bus

WSIF
- In Memory
- REST
- JCA
- COM+
- SOAP

Service-Oriented Architecture

Orchestrate Services

Develop
Integrate
Change
Monitor
Manage
Secure
Orchestrating Services

- Order Entry
- Credit Rating
- United Loan
- Fulfillment
- Star Loan
- Service Bus
- Application Server

Oracle and BPEL

- Expert in BPEL through Collaxa acquisition
- Core contributor to BPEL4WS specification
- Co-Lead BPEL tooling project for Eclipse
- BPEL Support in Oracle JDeveloper and Oracle BPEL Process Manager

Oracle BPEL Process Manager

- Oracle BPEL Process Manager
- BPEL in the standard for expressing a set of discrete services into an end-to-end process flow, significantly reducing the cost and complexity of process integration initiatives.

Getting Started

- 2-Minute Product Tour
- BPEL Learn by Example (PDF)

http://www.oracle.com/technology/bpel
DEMONSTRATION

EJB and BPEL

Service-Oriented Architecture

Integrate

Orchestrate

Develop Secure Services

Change Manage Services

Monitor
Secure Services

- BPEL
- ESB
- App Server
- Federate Users
- Authorize Users
- Authenticate Users
- Manage Identities
- Provision Users
- LDAP

Manage Services

- Bus. Process
- Enterprise Service Bus
- WSIF
- In Memory
- REST
- JCA
- COM+
- SOAP

ORACLE
Demonstration

Security and Management

Demonstration

Bus. Process
LoanFlow Process

Security Policy
Encryption
TCP Tunnel
Decryption
Security Policy

Service
CreditRating Service

Communication over the Internet
Service-Oriented Architecture

Monitor Services

Business Activity Monitoring
Service-Oriented Architecture

Change Services
Dynamic SOA

Develop
Monitor
Change

Management Policy
Monitoring Policy
Security Policy

JSF
EJB 3.0
BPEL

Common Metadata Repository
SOA Blueprint

Common Metadata Repository
- JSF
- EJB 3.0
- BPEL
- Enterprise Service Bus
- Java EE
- WSIF

Community Contributions
- Oracle 10g JDeveloper
- Eclipse
- EJB 3.0
- Free!
- JSF
- BPEL
- EJB 3.0
- JSF
- More...
- Now in Open Source
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