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Accenture and the U.S. Air Force

**Business Process Integration
Using Business Process
Execution Language**

Foundations of Our Repeatable SOA Practice

- 5-year \$450M SOA investment
- Repeatable, evolutionary processes and tools across the corporation
- Standard training for Accenture's 41,000-person SOA practice (18,900 are Oracle-focused)
- Accenture and Oracle have a master alliance agreement that facilitates joint development and delivery and extensive training
- Pioneered SOA Reference Architecture for Oracle V2 / Fusion Architecture Framework
- Methodology driven implementation to reduce time and cost



Accenture Innovation Center, the first and only center of its kind to be located on Oracle's main campus

SOA Project Services: Vendor Strategies
Ovum report by Angel Dobardziev,
October 8, 2007

“Accenture's strengths lie in its extensive business and industry understanding, which it is able to link closely to its rapidly expanding SOA technology capability and broad SOA project experience with a variety of SOA technology platforms.”

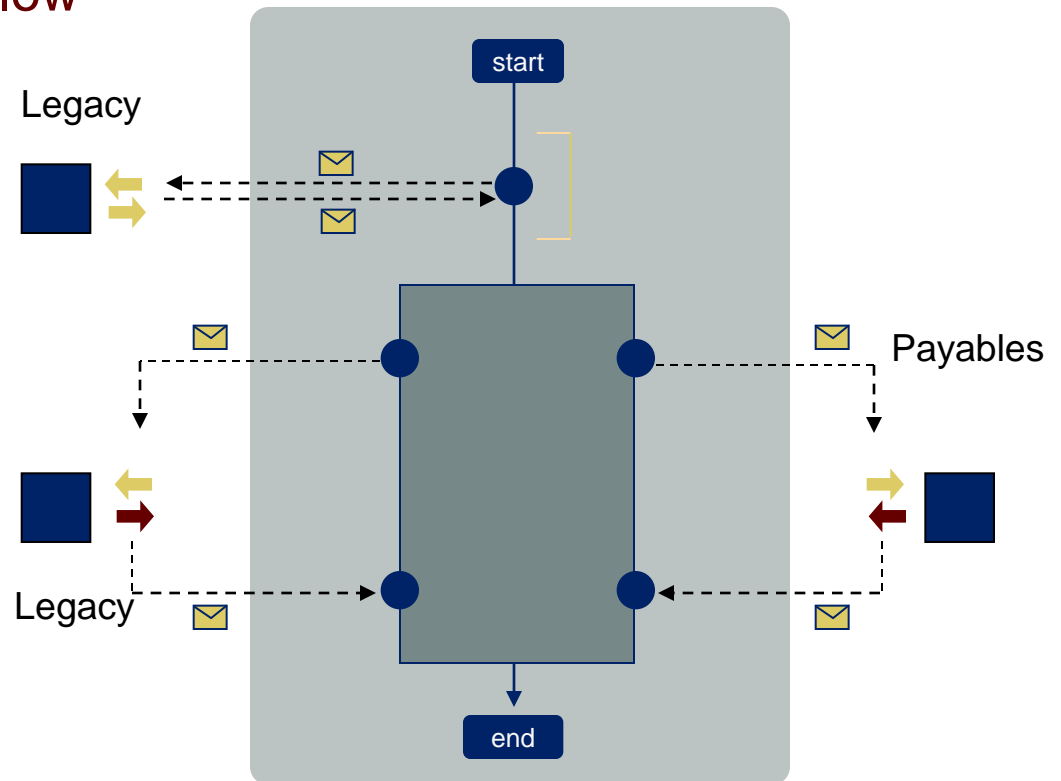
SOA Sample Methods and Tools

- Accenture Delivery Methods
- Accenture Fusion Value Roadmap
- SOA Strategy Roadmap
- Accenture Value Realization Tool
- SOA Assessment Model
- Delivery Methods Estimator for Oracle and SOA
- SOA Training Curriculum – Intro to SOA, Oracle BPEL Designer Kit

Introduction to Business Process Execution Language (BPEL)

Markup language for composing a set of discrete services into an end-to-end process flow

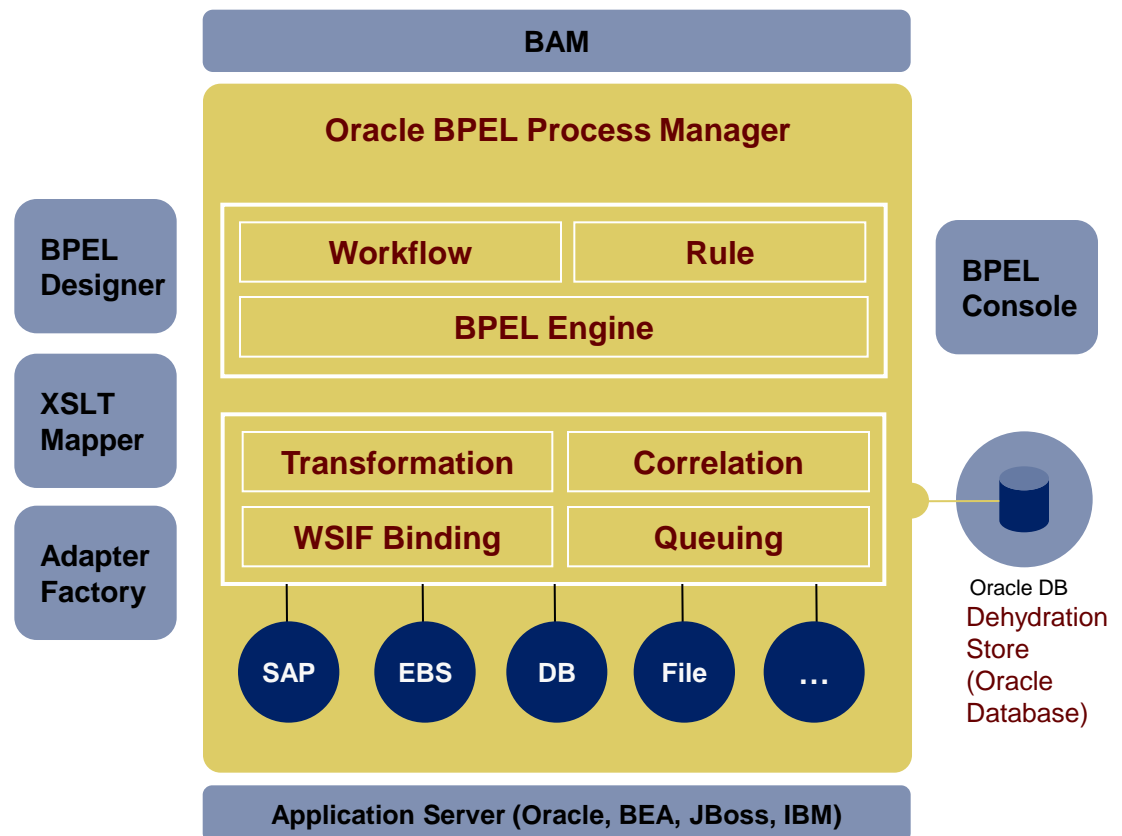
- The best integration solution for XML and Web services but also Java, JCA and JMS
- Rich support for async interactions, parallel processing and exception management
- Leverages XML Schema, XSLT, XML Query, WS-Security, WS-Addressing and WSIF



BPEL Process Manager

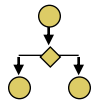
Enterprise-strength infrastructure for designing, deploying and managing BPEL business processes

- Comprehensive and native BPEL implementation
- Easy-to-use modeling tool
- Scalable and reliable engine
- Flexible binding framework
- Rich management and monitoring
- Support for Oracle AS, WebLogic and WebSphere
- Get up and running in less than 15 minutes!



BPEL - Key Features

BPEL DESIGNER



MODELING

- Comprehensive BPEL 1.1
- Visual Modeling Tool
- Native Java Embedding
- XML Facade
- XQuery Transformation
- Detailed Error Reporting
- Ant-based build and deployment framework
- Versioning

WSDL/JCA



ADAPTERS

- Bindings to 100+ backend systems (JCA)
- JMS Bridge
- .NET, Axis, Workshop, Glue, Systinet, interop
- User Tasks/Workflow
- Email with Attachment

WORKFLOW



WORKFLOW

- Worklist UI
- LDAP Integration
- Notification
- Expiration/Escalation
- Attachments
- Built-in Approval Patterns
- Auditing

BPEL ENGINE



EXECUTION RUN-TIME

- Comprehensive BPEL 1.1
- Sync. Messaging
- Async. Messaging
- Context Dehydration
- Reliability
- Side-by-side versioning
- Compensating Transactions
- Clustering
- Large XML documents

BPEL CONSOLE



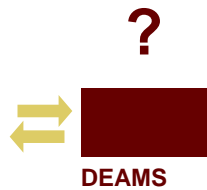
MANAGEMENT

- Visual Monitoring
- Auditing
- BPEL Debugging
- In-flight Administration
- Performance Tuning
- Task Management
- Partitioning/Domains

BPEL, XQuery, XSLT, WS-ADDRESSING

Application Server (Oracle, WebLogic, WebSphere, JBoss)

Client Example: DEAMS



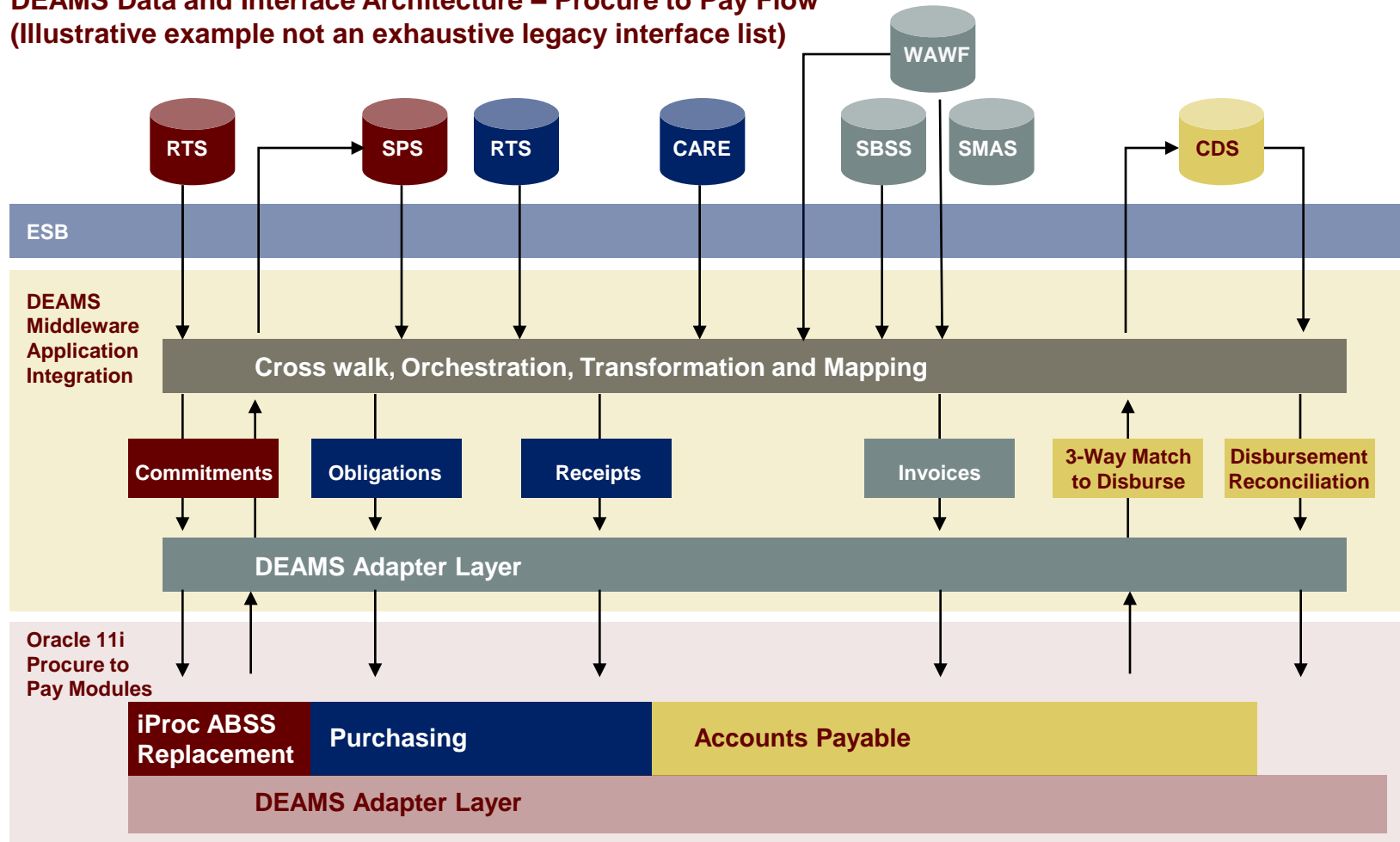
Integration Challenges

- Disparate legacy systems
- Different communication protocols
- How to tie these systems into a standard process flow
- Processes must have proper exception handling
- Processes must be scalable
- Processes must have automatic notifications

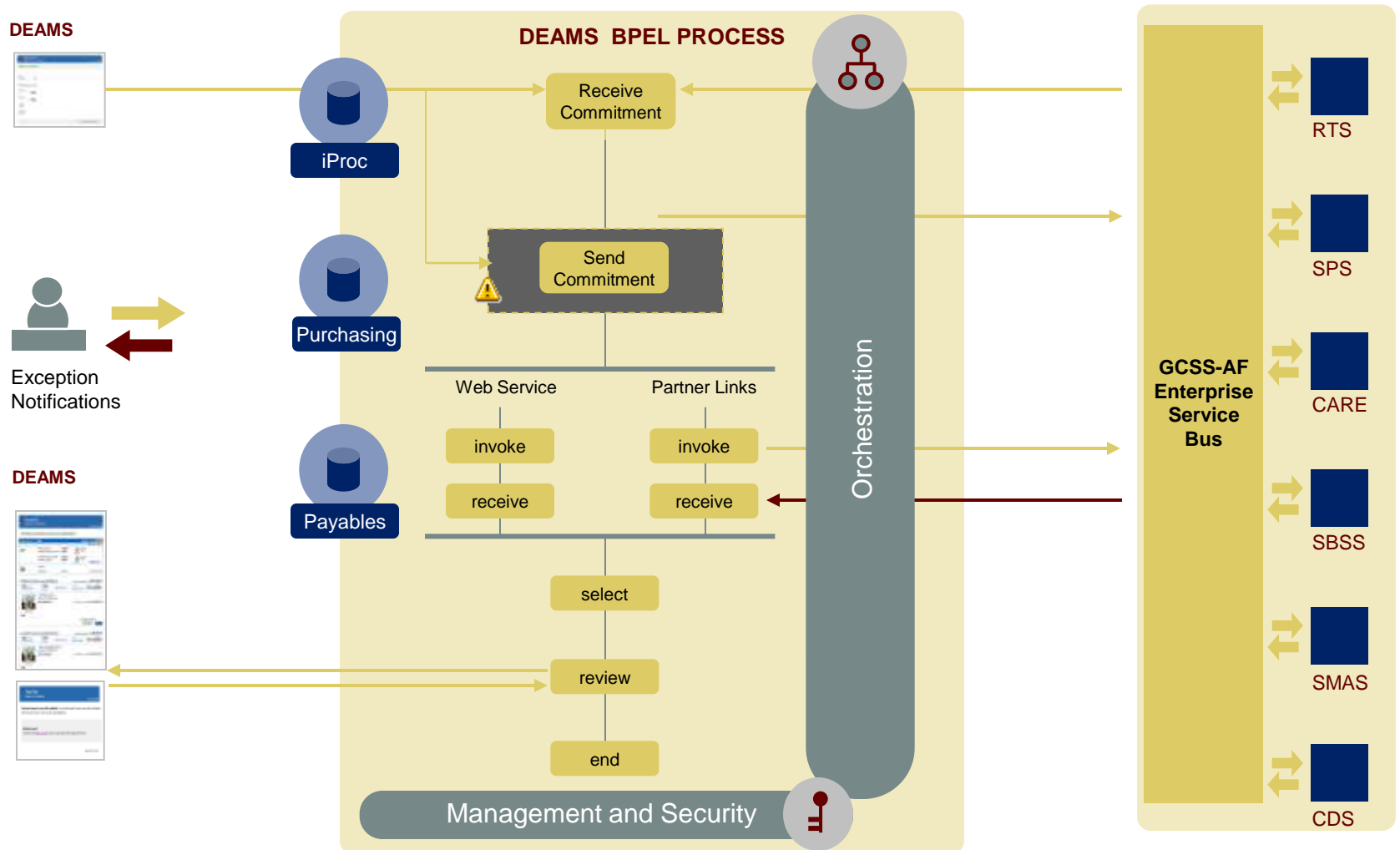
DEAMS Integration Architecture

DEAMS Data and Interface Architecture – Procure to Pay Flow
 (Illustrative example not an exhaustive legacy interface list)

Cross walk, Orchestration, Transformation and Mapping

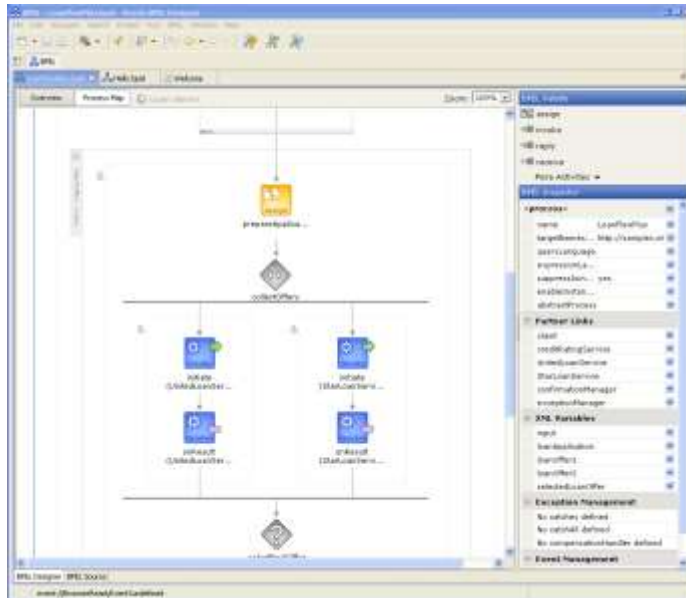


DEAMS BPEL Process Flow



Extensible BPEL Designer Palette

JDeveloper



Drop-and-configure



Library of reusable
BPEL fragments



Order
Transform



Approval



Validation
Rule

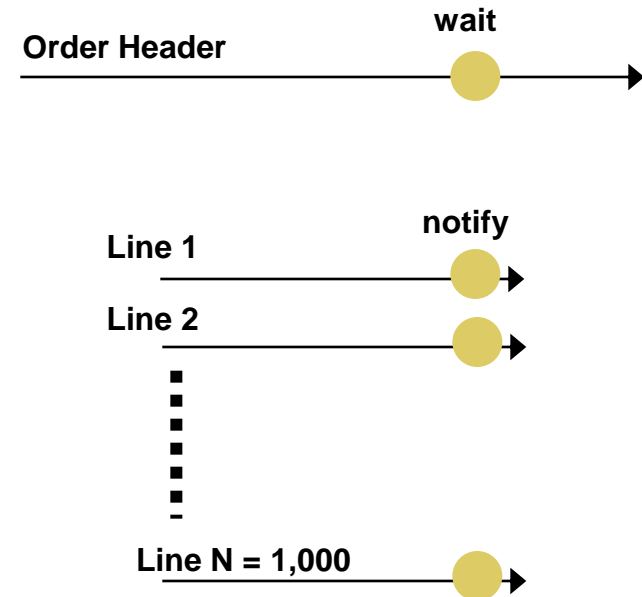
Master/Detail Relationship

Problem

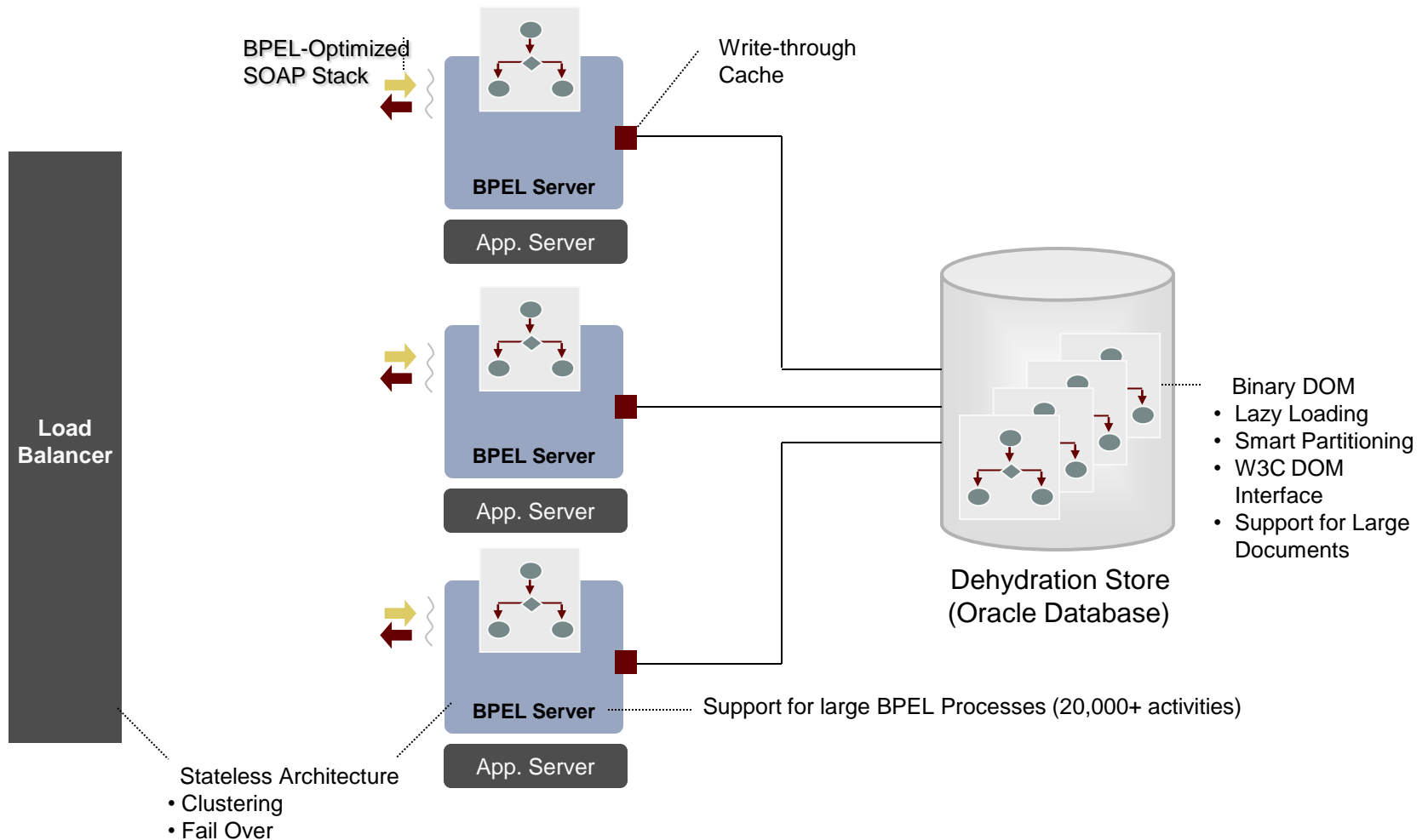
- A purchase header can include 1000s line items
- The header flow needs to be able to wait all associated detail flows are completed
- Details flow need to be able to notify the header flow that they are completed

Solution

- Add a <wait> and <notify> activities to BPEL for intra master/detail communication



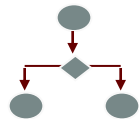
Scalable for Performance



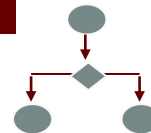
GCSS-AF Enterprise BPEL

Eclipse, JDeveloper

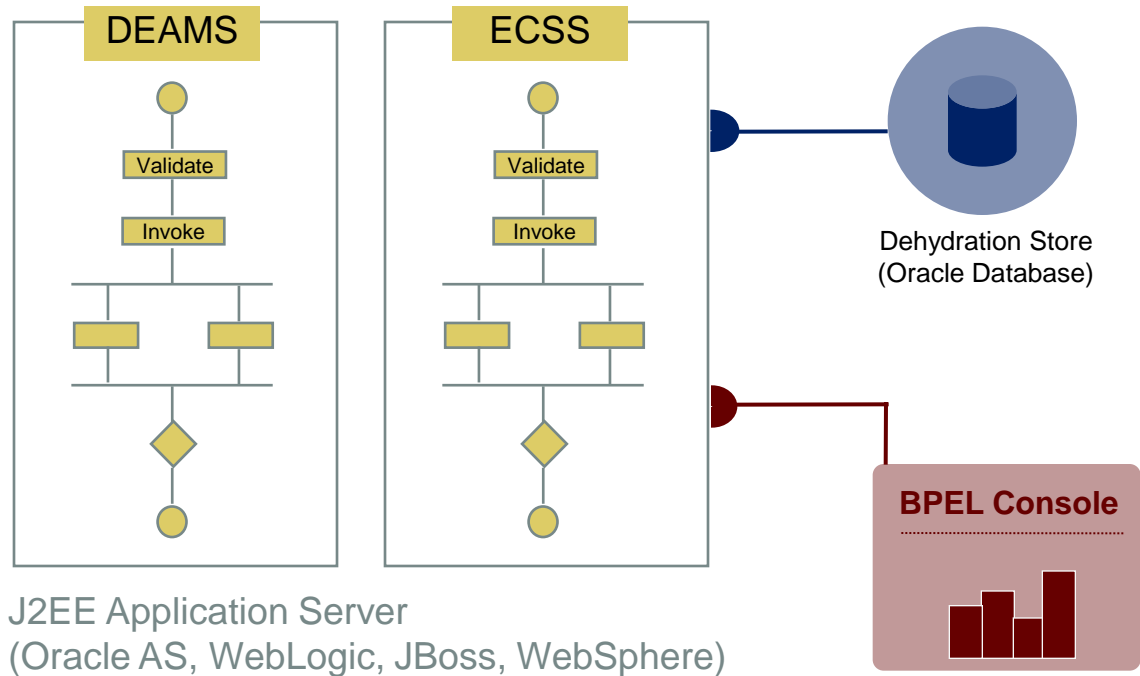
BPEL Designer



BPEL



BPEL Process Manager



J2EE Application Server
(Oracle AS, WebLogic, JBoss, WebSphere)

Supporting Clients Through BPEL Efforts

Client	Project Highlights
Global PC Manufacturer	<ul style="list-style-type: none"> • Teaming with client on an SOA assessment to integrate numerous disparate systems. • Standardizing technology and business processes across different regions and geographies, seamlessly integrating disparate systems with the Oracle EBS Suite and reducing data duplication. • Working to define the SOA reference architecture for integration activities, performing an Oracle SOA capability assessment, preparing an integration architecture roadmap and recommending necessary infrastructure for SOA implementation. • Implementing in a modular fashion, targeting the business-critical “Quote-to-Collect” process to establish the root for SOA.
Large West Coast Retailer	<ul style="list-style-type: none"> • Teamed with client to develop SOA roadmap to transform the client’s integration space into a streamlined, structured, reusable platform. • Addressed issues related to evolution of client’s IT application portfolio—e.g., inconsistent error handling, data leakage, low component reuse and integration logic spread out among the applications. • Effort grew into a global SOA program comprising a core architecture team and three separate projects delivering 80+ interfaces. • The SOA program leverages a large portion of the Oracle Fusion suite including BPEL, ESB, ODI, B2B, OWSM and BAM.
Large US Institution	<ul style="list-style-type: none"> • Teaming with client to transform the creation, deployment and management of new value-added services. • Client aiming to improve regulatory requirements, customer satisfaction and service quality by redesigning and integrating more efficient middle-office processes through automation. • Working on a production pilot program to demonstrate the value of process orchestration and process monitoring and an ability to model a complex and long-running process in the toolset; as well as to confirm elements of the required delivery model (i.e., tasks, effort, skills, and infrastructure requirements). • SOA components include Oracle BPEL and BAM, as well as IBM ESB – MQ, IBM Data Power – Security, Siebel – CRM Front-End Solution, and PI – SunGard Financial Back-End System.
Large Steel Manufacturer	<ul style="list-style-type: none"> • Provide an agile integration framework to achieve application integration for the enterprise with more than 300 systems in a global environment. • Reduce number of point-to-point interfaces and overhead associated in maintaining point-to-point interfaces due to changes in the business processes. • Provide capabilities for event-driven applications.

Begin Integrating Your Business Processes

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