Agenda

- Oracle AS Adapters Overview
- Oracle AS Adapter Services
- Oracle AS Adapters for Technology
- Oracle AS Adapters for Packaged Application
- Oracle AS Adapters for Legacy Applications
- Oracle AS Adapters BPEL PM Integration
- Q&A
ORACLE AS 10g Adapters — Overview
Oracle Application Server 10gR2

- Development Tools
- Enterprise Portal
- Business Intelligence
- Integration
- Systems Management
- Identity Management
- Enterprise Application Server
- Grid Computing
Oracle Integration 10.1.2 Components

InterConnect

B2B

Data Hub

BPM

BAM

Messaging

Transformation

Routing

Adapters

Enterprise Service Bus

Oracle Integration 10.1.2 Components
One stop shop for connectivity

Oracle, Informix, DB2, MSSQL, Sybase

Delimited, Positional, Cobol copy book, DTD, XSD, PDF, PS

Oracle Applications, Peoplesoft, Siebel, J.D.Edwards

Enterprise Manager
JMS, AQ, OC4J JMS, IBM MQSeries, TIBCO Rendezvous

Legacy

Database/Files

Oracle AS Adapters

Messaging Middleware

Tuxedo, VSAM, IMS/ TM, IMS/ DB, CICS
Oracle AS Adapters

Enterprise-strength infrastructure for connectivity to Enterprise Information Systems (EIS).

- Bi-directional connectivity
- Service Oriented Architecture (SOA)
- Open Standards Support
  - WSIF
  - WSDL
  - JCA
  - WSIL
  - SOAP
- Broad range of connectivity
- Easy-to-use Wizards
- Managed through Oracle Application Server 10g
- Seamless integration with Oracle AS products.
Oracle AS Adapter – Key Features

**Design Time**
- Browse, search, extract and generate EIS schemas
- JDeveloper/Eclipse Adapter Wizard
- WSDL schemas for both Outbound and Inbound Interactions
- WSIL browser for Packaged and Legacy Adapters

**Run Time**
- Standards based Adapter Framework
- Supports synchronous & asynchronous communication
- Transaction support
- Real-time event support
- Supports standard J2EE Server - Oracle Application Server, BEA Weblogic, IBM WebSphere, JBoss
- Globalization support

**Standards Support**
- Support for open Standards
  - WSDL, WSIF, WSIL
  - XSD
  - JCA, JMS
- Architecture
  - SOA
  - EDA
- Light-weight SDK

**Life-cycle Management**
- Sophisticated error management & recovery
- Scalable
  - Load Balancing
  - Connection Management
  - BPEL cluster, Oracle AS cluster, Oracle Grid
- Fail-over, HA support
- Managed via Application Server Control
# 300+ Adapters

## Applications
- Oracle Applications
- SAP R/3
- Peoplesoft
- JD Edwards
- Siebel
- Clarify
- Lotus Notes
- Ariba
- AXIOM mx/open
- Baan
- BroadVision
- Clarify
- Commerce One
- Hogan Financials
- i2 Technologies
- Lawson
- Livelink
- Manugistics
- Microsoft CRM
- Vantive
- Walker Interactive
- Remedy
- Sales Force

## Databases
- Oracle 8i and above
- IBM DB/2 UDB
- Informix
- Clarion
- Clipper
- Cloudscape
- DBASE
- Dialog
- Essbase
- FOCUS Data Access
- Great Plains
- Microsoft SQL Server
- MUMPS (Digital Standard MUMPS)
- Navision Financials (ODBC 3.x)
- Nucleus
- Paradox
- Pointbase
- PROGRESS
- Red Brick
- RMS
- SAS Transport Format
- Sybase
- Teradata
- Unisys DMS 1100/2200
- UniVerse

## Technology
- SOAP
- HTTP, HTTP-S
- Email – POP3, SMTP, IMAP
- FTP, FTP-S
- Flat File
- LDAP
- JMS
- Oracle AQ
- IBM MQSeries
- TIBCO Rendezvous
- Socket

## Legacy
- CICS
- IMS/DB
- IMS/TM
- VSAM
- ADABAS
- Natural
- Tuxedo
- CA-Datacom
- Screen Scraping
- CA-IDMS
- C-ISAM, D-ISAM, K-SAM, QSAM
Adapter Partners

- iWay Software Ltd
- Attunity
- Neon Systems
- Librados
- Pervasive Software
- GT Software
- ItemField
Adapter Services
Oracle AS Adapter Services – Outbound 2-way synchronous

J2EE Application Server
(Oracle AS, BEA Weblogic, JBoss, IBM Websphere)
Oracle AS Adapter Services – Subscribe – JCA 1-way Outbound Interaction

JCA outbound Interaction request → Oracle AS Adapters → Backend Native API → Backend application

J2EE Application Server
(Oracle AS, BEA Weblogic, JBoss, IBM Websphere)

Oracle AS Adapters

BAM
PORTAL
INTER CONNECT
BPEL PM
J2EE Applications
Oracle AS Adapter Services – Asynchronous event publish (JCA Inbound Interaction)
Oracle AS Adapter Services – Metadata extraction

Browse, search, EIS metadata and create XSD/WSDL schemas for EIS business objects/operations.
ORACLE AS Adapters — Technology
Database Adapter

- Leverages proven TopLink technology and performs object to relational mapping.
- Allows any JDBC Provider to be plugged in.
- Supports a variety of DML operations.
- Support multiple ways to publish database events.
- Robust Query Framework
- Rapid, easy-to-use, JDeveloper wizard-driven modeling to map between relational and object schemas.
- Expressions support for visually building complex queries
- Metadata expressed as XSDs and WSDLs
- Supports JTA transactions
- Caching for high performance
- Leverages OC4J connection management for scalability
- Deployable in Oracle Application Server and BPEL Clusters.
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Files Adapter

- Comprehensive Support for parsing and formatting of different file formats – Delimited, Positional, XML, binary, COBOL copy books, Fixed length, variable length, complex relationships, unstructured data
- Sophisticated file-pattern matching and polling capabilities
- Error recovery and check point capabilities
- User-friendly, JDeveloper modeling
- Native Format Builder wizard for sampling files & auto-generation of metadata
- Metadata including parsing and formatting details expressed in XSD/WSDL format.
- Multi-threaded support for concurrent execution
- Leverages OC4J connection management for scalability
- Deployable in Oracle Application Server & BPEL Clusters
- Batching/De-batching for performance
FTP Adapter

- FTP Read and Write operations
- Certified with various FTP Servers
- Rich file-pattern matching and polling capabilities
- Supports Secure FTP
- Error recovery and check point capabilities
- User-friendly, JDeveloper modeling
- Metadata including parsing and formatting details expressed in XSD/WSDL format.
- Leverages OC4J connection management for scalability
- Deployable in Oracle Application Server & BPEL Clusters
- Batching/De-batching for high performance
• Supports both point-to-point and publish/subscribe paradigms
• Rich support for AQ data types—Raw, Object (ADT), XML
• Exposes generic AQ Headers and Payload Headers
• Supports AQ Native Correlation
• Enables consumption of AQ messages based on Priority, Correlation ID and rule-based subscription.
• User-friendly, JDeveloper modeling
• Native Format Builder wizard for handling delimited, positional payloads
• Metadata expressed in XSD/WSDL format.
• Leverages OC4J connection management for scalability
• Deployable in Oracle Application Server & BPEL Clusters
• Extensive error handling, message rejection and repair capabilities
• Supports AQ Transaction
JMS Adapter

- Exposes JMS Headers for further manipulation by BPEL PM
- Supports JMS Native Correlation
- Supports the various JMS Types
- Enables consumption of JMS messages based on Priority, Correlation ID and SQL-92 based message filters
- Rapid, user-friendly, JDeveloper wizard-driven modeling
- Native Format Builder wizard for handling delimited, positional payloads
- Metadata expressed in XSD/WSDL format.
- Leverages OC4J connection management for scalability
- Deployable in Oracle Application Server & BPEL Clusters
- Extensive error handling, message rejection and repair capabilities
- Supports JMS Transaction

Oracle AQ
OC4J JMS
IBM MQ Series
TIBCO Rendezvous
Sonic MQ
JMS Providers
ORACLE AS Adapters — Packaged Application
Oracle Applications Adapter

- Intuitive integration to Oracle by Oracle
- Support for all EBS 11i modules
- Leverages proven technology, over 100 EBS customers
- Integrates via Open Interfaces and Oracle Application Stored Procedures for inserting data into Oracle Applications.
- Integration with Business Event System (BES) for receiving over 900+ Oracle Applications events in real-time.
- Bi-directional XML integration with XML Gateway for exchanging OAG based XML documents.
- Rapid, user-friendly, JDeveloper wizard-driven modeling
- Metadata expressed in XSD/WSDL format.
- Leverages OC4J connection management for scalability
- Deployable in Oracle Application Server & BPEL Clusters
Peoplesoft Adapter

• Comprehensive bi-directional support for People Tools version 8.1.x and 8.4.x
• Bi-directional interface capabilities to Peoplesoft by exploiting the most powerful Peoplesoft integration technologies - Component Interface (CI), the Integration Broker with Application Messages, and (starting with PeopleTools 8.42) the new SOAP to CI interface.
• Support for custom Component Interfaces (including custom ones) and custom methods within Component Interfaces.
• Support for guaranteed event delivery—can receive Application Messages via FTP, HTTP, TCP/IP and JMS
• User-friendly, modeling tool
• Metadata expressed in XSD/WSDL format.
• Leverages OC4J connection management for scalability
• Deployable in Oracle Application Server & BPEL Clusters
• Comprehensive bi-directional support for Siebel version 7.x
• Support for Siebel Business Object, Business Services and Integration Objects
• Interfaces via Java Data Bean and COM Data Bean API
• Support for guaranteed delivery of Siebel events – Files, MQSeries, HTTP
• Rapid, user-friendly, modeling tool
• Dynamic introspection of out-of-the-box & custom Siebel objects.
• Schemas expressed as XSD/WSDL
• Leverages OC4J connection management for scalability
• Deployable in Oracle Application Server & BPEL Clusters
SAP Adapter

- Comprehensive bi-directional support for SAP Basis 4.0B – 4.7, SAP Web Application Server Version 6.2 and higher, and MySAP.com technology solutions (SAP BW, SAP APO, SAP CRM, SAP SRM, SAP EBP, SAP SEM, SAP WP, SAP KW).
- SAP Certified
- Support for BAPI, IDOC, RFC and transactional RFC
- Support for guaranteed delivery of SAP events
- Support for SAP customizations
- Integrates with SAP Business Object Repository (BOR)
- Schemas expressed as XSD/WSDL
- Leverages OC4J connection management for scalability
- Deployable in Oracle Application Server & BPEL Clusters
J.D. Edwards Adapter

- Comprehensive bi-directional support for J.D.Edwards – Enterprise One 8.9, 8.10, 8.11
- Support for Gen Java Business Functions, Z-Files and Real-time event notification (RTE)
- Support for guaranteed delivery of JDE events
- Support for guaranteed delivery of J.D.Edwards events
- Support for JDE customizations
- Schemas expressed as XSD/WSDL
- Leverages OC4J connection management for scalability
- Deployable in Oracle Application Server & BPEL Clusters
ORACLE AS
Adapters
— Legacy
Legacy Adapter Architecture

Oracle Studio (Eclipse) -> Oracle Connect

Oracle Legacy (JCA) Adapter

Oracle Connect
- CICS
- Tuxedo
- VSAM
- IMS/TM
- IMS/DB

Event Queue
- Query Processor & Optimizer
- Server processes

J2EE Application Server

Legacy Platform (MVS, OS/390)

BPEL PM
- INTERCONNECT
- PORTAL
- BAM
- J2EE Applications
Legacy Adapter - Features

- Leverages and capitalizes on existing legacy data
- Accelerates mainframe integration projects
- Incorporates mainframes into a service-oriented architecture
- Tight integration with Oracle Application Server product components
- Standards based solution
- Rapid, user-friendly, modeling tool.
- Convert definitions in PSB, DBD and COBOL copy books into XSD/WSDL.
- Concurrent processing for high performance
- Load-balancing and HA support
- Support for native mainframe security mechanisms – RACF, ACF-2, TopSecret
- Easy-to-set up, configure and administer
## Legacy Adapters – Features

<table>
<thead>
<tr>
<th>CICS</th>
<th>VSAM</th>
<th>IMS/DB</th>
<th>IMS/TM</th>
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<tbody>
<tr>
<td>• Exposes CICS transactions as Web Services</td>
<td>• Direct VSAM or VSAM under CICS</td>
<td>• Three ways to integrate IMS/DB:</td>
<td>• Two ways to integrate IMS/TM:</td>
</tr>
<tr>
<td>• Real-time event capture and delivery in XML format</td>
<td>• VSAM access: KSDS, RRDS, ESDS</td>
<td>• Direct data access via DL/I</td>
<td>– OTMA access to Message Processing Programs</td>
</tr>
<tr>
<td>• Uses TCP/IP protocol - No SNA setup required</td>
<td>• Query Processor for optimized query execution</td>
<td>• Access IMS/DB via CICS (DBCTL)</td>
<td>– TCP/IP access to IMS Transaction Gateway</td>
</tr>
<tr>
<td>• Communicates via EXCI and exchanges COMMAREA buffers</td>
<td>• Robust distributed transaction management and integrates with IBM Resource Recovery Service (RRS)</td>
<td>• Access IMS/DB via IMS/TM (DBDC)</td>
<td>• Real-time event service</td>
</tr>
<tr>
<td>• Robust transaction management (supports CICS sync points) and integrates with IBM Resource Recovery Service (RRS)</td>
<td>• Map non-relational data sources to a relational data model.</td>
<td>• Query Processor for optimized query execution</td>
<td>• Robust transaction management and integrates with IBM Resource Recovery Service (RRS)</td>
</tr>
</tbody>
</table>
Oracle AS Adapters — BPEL PM integration
Technology Adapters – design-time

JDeveloper
BPEL Designer/Adapter Wizard

BPEL SUITCASE
- Deployment XML
- Adapter Service WSDL
BPEL PM Invoke – Adapter Partner Link

JDeveloper/Eclipse

BPEL Designer/Adapter Wizard

BPEL SUITCASE
Adapters WSDL - JCA binding

BPEL Process Manager
WS Sync - Invoke
WS Sync - Response

Adapter Framework [WSIF JCA Provider]

Oracle AS Adapters (JCA 1.5 Resource Adapter)

J2EE Container (Oracle Application Server, BEA Weblogic, JBoss, IBM Websphere)

Backend application

Backend Native API
BPEL PM Receive – Adapter Partner Link

1. Start Resource Adapter
2. Activate Endpoint
3. Deactivate Endpoint

- Create Message Endpoint
- Call onMessage()

J2EE Container
(Oracle Application Server, BEA Weblogic, JBoss, IBM Websphere)
QUESTIONS & ANSWERS