Oracle Enterprise Service Bus

Overview

Oracle Business Integration provides the complete web services infrastructure for building, deploying and managing distributed applications based on open systems standards. The Oracle ESB component is designed to implement your Service Oriented Architecture (SOA) and Event Driven Architecture (EDA) providing a responsive, low cost, high impact framework for matching technology needs to your business problems.

Product Overview

Oracle ESB is the foundation for delivering services utilizing an SOA and EDA. At its core, it is a loosely coupled application framework that provides businesses with increased flexibility, reusability and overall responsiveness in a distributed, heterogeneous, message-oriented environment.

![Figure 1: Oracle ESB Mediator](image)

Oracle Business Integration consists of four important solution components: (i) ESB, (ii) BPEL PM, (iii) OWSM and (iv) B2B. Oracle provides the total one-stop platform for enterprise integration. It is fully integrated with Oracle AS, Oracle 10g RDBMS, Oracle JDeveloper’s integrated DVE and Oracle BI. It leverages Oracle infrastructure and GRID features such as security, high availability and scalability.

Reliable Multi-Transport Bus

Oracle ESB provides a flexible real-time enterprise backbone supporting multiple protocols where all services have typed payloads using the Web Services Definition Language (WSDL). It also enables special in-memory optimization for service calls within the same virtual machine. Oracle ESB uses the Oracle Enterprise Messaging Service (OEMS) messaging infrastructure for managing fast, scalable, guaranteed service for point-to-point and publish/subscribe patterns. OEMS provides interoperability with many 3rd party messaging providers and delivers the following JMS qualities of service (i) Database persistence (ii) File persistence and (iii) In-Memory.
INTEGRATED PLATFORM
• Oracle AS Adapters
• Oracle Enterprise Messaging Service
• Oracle BPEL PM
• Oracle AS BAM
• Oracle AS B2B
• Oracle Web Services Manager
• Oracle Business Rules
• Oracle AS J2EE
• Oracle 10g
• Oracle Grid Enterprise Manager
• Oracle Data Hubs
• Oracle BI
• Oracle JDeveloper

ADAPTER DATA SOURCES
• SAP R/3, PeopleSoft, J. D. Edwards, Siebel, Oracle Applications
• Tuxedo, CICS and IMS
• Oracle, Sybase, DB2 and all JDBC compliant sources
• Oracle Advanced Queues, Databases, File, JMS and HTTP

ADDITIONAL INFO
For additional information on Oracle AS Integration and trial software downloads, please visit www.oracle.com.

Business Data Transformations
Utilizes standards based data mapper functionality within JDeveloper to create transformation templates in the XSLT language for reuse across the enterprise. The auto-mapping feature remembers and reuses common mappings from previous transformations. Domain Value Mappings provide fast in-memory lookups.

Pervasive Enterprise System Connectivity
Oracle Adapters provide bi-directional, real-time connectivity and support open standards such as JCA, WSDL, XML, JMS, Web Services and WSIF. The Packaged Application and technology protocol adapters provide access to over 300 data sources with tight integration to Oracle Applications. All adapters conform to the J2EE Connector Architecture (JCA) open standard adopted by all major integration vendors.

Flexible Content Based Routing
The Oracle ESB Routing Service Mediator exposes routing rules using design time deployment descriptor definitions that can be modified at runtime to adjust application efficiency. It supports XPATH, Oracle Business Rules and external providers. Content filtering can also be implemented in messaging systems such as JMS using configurable filter based subscriptions, headers and message selectors. CBR services can be deployed with Oracle JDeveloper using Java, PL/SQL or Oracle BPEL PM.

Integrated Modeling Environment
Oracle JDeveloper provides a comprehensive, easy to use design time graphical interface for building end-to-end message flows and registering ESB service metadata. It also includes a WSDL editor, integrated XSLT mapper, XSD schema editor for standard J2EE application development.

Comprehensive Manageability
Distributed ESB services are centrally managed with Oracle Enterprise Manager (EM) and ESB Control. The ESB Control provides a service dependency viewer that enables visualization of fan-in and fan-out relationships for impact analysis of proposed changes to your systems. The console allows administrators to dynamically configure routing rules, transformations, domain value maps and other externally defined services.

Summary
Oracle Business Integration and ESB provide a complete, open, extensible, and mission-critical application integration platform that is best in class for value and functionality. Regardless of your organization’s size, the complexity of your IT infrastructure, or the increasing demands of your business, Oracle Business Integration and ESB can provide the edge you need in today’s competitive business environment.