

ORACLE SOA SUITE

KEY FEATURES AND BENEFITS

COMPLETE
INTEGRATED
OPEN
BEST-OF-BREED

FEATURES

- **SOA Composite Editor**
 - Graphical editor to assemble heterogeneous components into composite applications
 - Service Component Architecture (SCA)
- **SOA Service Infrastructure**
 - Unified runtime for eventing & services
 - Service Data Objects (SDO)
- **Extreme Performance & Scalability**
 - Runs on the Applications Grid: WebLogic Server, JRockit & Coherence
- **Pluggable Services**
 - BPEL Process
 - Mediator Engine
 - Human Workflow
 - Business Rules
 - B2B
 - Business Activity Monitoring
- **OracleService Bus**
 - Multi-protocol bus
 - Industry's highest performance & scalability
- **Connectivity**
 - Certified with 300+ Application adapters
 - Legacy adapters
 - Technology adapters
- **Unified Management & Monitoring**
 - Enterprise Manager
 - End-to-end instance tracking
 - One-stop solution for Systems and Business Exceptions Management
- **Integrated Security**
 - Zero-configuration

Changing markets, competitive pressures and evolving customer needs are placing increasing pressure on IT to deliver greater flexibility and speed. Leading companies are adopting Service Oriented Architecture (SOA) as a means of delivering on these requirements by overcoming the complexity of their application and IT environments. SOA facilitates business critical IT initiatives geared towards enterprise application integration (EAI), composite application development and legacy modernization. Benefits include rapid composition of complex applications, ease of maintenance and change, and improved business visibility.

Product Overview

Oracle SOA Suite is a comprehensive, hot-pluggable software suite to build, deploy and manage Service-Oriented Architectures (SOA). The components of the suite benefit from common capabilities including consistent tooling, a single deployment and management model, end-to-end security and unified metadata management.

Oracle SOA Suite's hot-pluggable architecture helps businesses lower upfront costs by allowing maximum re-use of existing IT investments and assets, regardless of the environment (OS, application server, etc.) they run in, or the technology they were built upon. Its easy-to-use, re-use focused, unified application development tooling and end-to-end lifecycle management support further reduces development and maintenance cost and complexity.

Businesses can attain improved efficiency and agility through rules-driven, business process automation with Oracle SOA Suite. Its ability to deliver real-time trending and analysis, rich visualization and end-to-end lifecycle visibility allows businesses to both predict and respond to change when and where it matters.

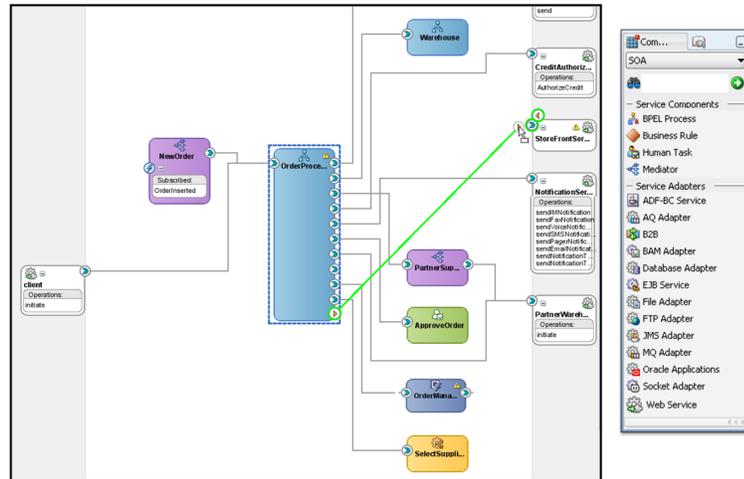
Oracle SOA Suite provides all the capabilities required to:

- Design SOA composite applications, with **JDeveloper**
- Connect to virtually any data source, technology (messaging, database, etc.), applications or trading partner through a unified connectivity framework including **adapters**, included **B2B gateway** and pre-integration with **Oracle Data Integration Suite**.
- Route, transform and virtualize services through the highly scalable **Oracle Service Bus**

- Centralized management of policies
 - Attachment of policies at design-time or runtime
 - **Built-in Real-Time Visibility**
 - Web Browser Dashboards
 - Real-Time Analytics
 - Complex Event Processing
 - Continuous Query Language (CQL)
 - **Governance-ready**
 - Publish, share and discover services right from JDeveloper
 - Dependency & Impact analysis
- Orchestrate and build process automation, of not just systems but also people through **Oracle BPEL Process Manager** and its **Human Task**
 - Build agility by externalizing specific blocks of logic using **Oracle Business Rules**
 - Perform real-time detection of specific patterns, across multiple data streams and time windows, through **Oracle Complex Event Processing (CEP)**
 - Gain real-time visibility into operation and performance of business processes, along with the ability to respond to specific situations, through **Oracle Business Activity Monitoring (BAM)**
 - Consistently and simply secure all services through a policy-driven integrated security framework and the **global policy manager** in Enterprise Manager
 - Execute SOA composite applications through a unified, optimized infrastructure: the **SOA Service Infrastructure**, that is built on top of the **Applications Grid, WebLogic Server, JRockit and Coherence**, but is also hot-pluggable and could **alternatively run** on non-Oracle middleware.
 - Manage and monitor all of the above components through a single console natively integrated with **Oracle Enterprise Manager Fusion Middleware Control**
 - Plug in an extensive **Governance** framework to manage, discover and promote re-use of services, in addition to providing tighter control through advanced dependency and impact analysis features

Oracle JDeveloper

Oracle JDeveloper is an integrated development environment for building service oriented applications using the latest industry standards for Java, XML, Web Services, SQL, and SCA. Oracle JDeveloper supports the complete development life cycle with integrated features for modeling, coding, debugging, testing, profiling, tuning, and deploying applications. JDeveloper 11g features a new Composite Assembly Editor to quickly and graphically assemble the various components and technologies used in a SOA project. User friendly wizards are provided to simplify many common tasks such as connecting to IT systems.



Unified Connectivity Framework – Adapters, B2B & ODI

Oracle Adapters enable connectivity to virtually any data source inside the enterprise. Oracle Adapters are available for more than 300 packaged applications, for legacy and mainframes including Tuxedo, VSAM, CICS, and for technology and protocols including FTP, Files, Database, AQ, and JMS. Oracle Adapters are standards based and support both Web Services and JCA.

Oracle B2B enables an enterprise to exchange information electronically with its trading partners. It supports a rich set of industry standards including EDI, UCCnet, RosettaNet, CIDX, PIDX, VICS, ebXML, UBL.

Additionally, Oracle SOA Suite is designed to work with Oracle Data Integrator (ODI), a comprehensive data integration platform including high-volume, high-performance batch integration. ODI's extract, load, and transform (E-LT) architecture leverages RDBMS engines to process and transform the data optimizing performance and scalability and minimizing cost.

Oracle Service Bus (OSB)

Oracle Service Bus is designed to connect, mediate, and manage interactions among heterogeneous services, legacy applications, and multiple enterprise service bus instances across an enterprise wide service network. It offers unparalleled QoS through unique policy-based service virtualization, service pooling, and throttling capabilities that meet the demands of your high-volume SOA projects.

Oracle Service Bus delivers enhanced productivity by providing visual debugging capability, fine-grained message level tracing and action level metrics. The visual debugger feature allows developers to define break-points, introspect variable context and data, and step-through the execution stack for inbound and outbound message processing pipelines in an intuitive, observable manner.

Oracle Service Bus eliminates the inefficiency associated with exchanging large

binary attachments over Web services through Message Transmission Optimization Mechanism (MTOM) and streaming attachments. To facilitate data exchange with legacy systems, Oracle Service Bus allows non-XML payloads with a host of datasources such as File, EJB, FTP, MQ, JMS and Tuxedo. Modern stateless service architecture is based on Representational State Transfer (REST).

BPEL Process Manager

Oracle BPEL Process Manager provides a comprehensive, standards-based and easy to use solution for assembling a set of discrete services into an end-to-end process flow, radically reducing the cost and complexity of process integration.

Oracle BPEL engine is the most mature, scalable, and robust BPEL server available today. It executes standard BPEL processes and provides a “dehydration” capability so that the state of long-running flows is automatically maintained in a database, enabling clustering for both fail-over and scalability.

Built-in **Human workflow** services such as task management, notification management, and worklist management are provided to enable the integration of people and manual tasks into BPEL flows.

Oracle BPEL Process Manager may be used for integrating applications and legacy systems, composing coarse grained services from finer grained services, building process centric composite applications, automating business processes, and workflow applications including sophisticated routing and escalation.

Oracle Business Rules

Oracle Business Rules enables business analysts to easily define, update, and manage key decisions and policies governing business processes and applications, e.g. business policies within business processes that are likely to change can be captured using business rules

Oracle Business Rules consist of a Rule Authoring Tool, a Rules engine, and SDK. The Authoring tool presents an English-like paradigm for declaring Rules that can be used by both programmers and business analysts. The Rules Engine is a fast and efficient JSR-94 compliant RETE based engine written in Java. The SDK enables rules generation by custom rules editing applications.

The screenshot shows the Oracle DecisionTable_2 interface. It features a table with columns R1 through R6 and rows for conditions, conflict resolution, and actions.

Conditions	R1	R2	R3	R4	R5	R6
C1 CurrentDate.date		During Sale			Before Sale, After Sale	
C2 CustomerOrder.vipStatus	PLATINUM,SILVER		PLUTONIUM,SILV...	PLATINUM,SILVER		PLUTONIUM,GOL...
C3 CustomerOrder.totalAmount	Low Value,Medu...	>=700	-	Low Value,Medium	High Medium,>=...	-
Conflict Resolution						
Override		R3				
Actions						
A1 modify Approval	<input type="checkbox"/>					
discount:double	15			10		
status:StatusType	StatusType.APP...			StatusType.APP...		
surcharges:double						

Business Activity Monitoring

Oracle Business Activity Monitoring (BAM) is a complete solution for building real-time operational dashboards to monitor business processes and services, services levels, and track key performance indicators (KPIs) from processes and services, with capabilities to take automatic or manually invoked corrective actions.

Oracle BAM enables business users to build interactive, real time **dashboards**, and proactive **alerts**. It leverages the latest web technology to deliver a rich, interactive personalized operational dashboard in which real time data and personalized reports are delivered to Business Users via a standard web browser. The user can also set personalized alert conditions that can be triggered and delivered to the user through e-mail, fax, phone, or other convenient channel. Users have the ability to take the appropriate corrective action from the dashboard on monitored events as needed, e.g. launch a business process in BPEL Process Manager.

Oracle BAM is built on a message-based, event-driven, memory-resident architecture specifically designed for the needs of real-time analytics and reporting applications. Oracle BAM is the first, and only, solution that provides **real-time visibility** into enterprise, delivering information within seconds of an event.

Integrated Security & Global Policy Manager

The integrated security framework enables security and identity management policies to be defined centrally but enforced globally, through zero-configuration preconfigured agents.

These policies govern web services operations such as access, logging, and content validation, and can be wrapped around existing web services with no modification to the services. Policies can be attached at design-time in JDeveloper or at runtime in the policy manager screen of Oracle Enterprise Manager.

The policy manager collects monitoring statistics as policies execute and displays them in a graphical format. Administrators can set quality of service levels for each application and the policy manager will display alerts when the application exceeds established targets. Monitoring Dashboard provides IT operations staff with real-

**ORACLE SOA SUITE
BEST OF BREED TOOLS**

KEY BENEFITS:

The Oracle SOA Suite delivers the SOA promise of visibility, flexibility, and speed. Best of breed tools provide industry leading functionality in each component. The tightly integrated comprehensive suite lowers the total cost of ownership.

The “hot-pluggable” architecture of the SOA Suite enables seamless integration of the Suite or components into any existing IT environment. Since the best of breed components of the Oracle SOA Suite may be adopted incrementally, they can be used to solve identified business problems, and expanded to enterprise deployments.

RELATED PRODUCTS:

- Oracle SOA Governance
- Oracle SOA Management Pack
- Oracle Data Integrator Suite
- Oracle WebCenter
- Oracle Identity Management
- Oracle Business Intelligence

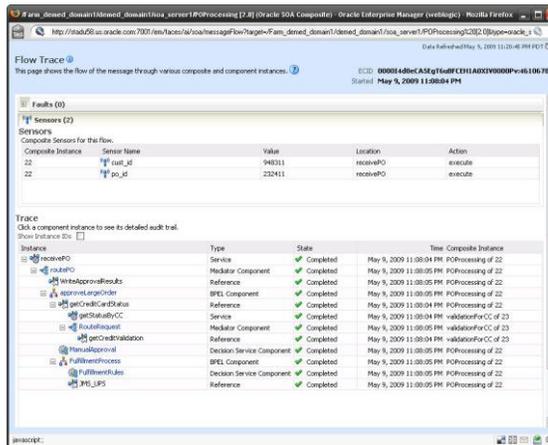
time visibility into the health, performance, security and utilization of web services.

SOA Service Infrastructure

The SOA Service Infrastructure consolidates in a single modular application the foundational capabilities of a SOA environment. Specialized and advanced capabilities are then provided by dedicated engines that plug in this infrastructure. This design eliminates many of the inefficiencies otherwise introduced during inter-application communications. In addition, administrators have a single application to install, cluster and manage, greatly simplifying their duties.

Oracle Enterprise Manager Fusion Middleware Control

Management and monitoring of Oracle SOA Suite is done through Oracle Enterprise Manager Fusion Middleware Control. In this web-based environment, administrators can perform everything, from attaching security policies to tracking down a specific message by searching on specific data, to identifying and repairing exceptions. Enterprise Manager also provides unparalleled visibility into the execution of processes, showing a complete end-to-end graphical representation of the exact flow followed by a given message, across all the products it might have traversed.



For More Information

To learn more about the Oracle SOA Suite please visit www.oracle.com/soa



Copyright © 2009, Oracle and/or its affiliates. All rights reserved.

This document is provided for information purposes only and the contents hereof are subject to change without notice. This document is not warranted to be error-free, nor subject to any other warranties or conditions, whether expressed orally or implied in law, including implied warranties and conditions of merchantability or fitness for a particular purpose. We specifically disclaim any liability with respect to this document and no contractual obligations are formed either directly or indirectly by this document. This document may not be reproduced or transmitted in any form or by any means, electronic or mechanical, for any purpose, without our prior written permission.

Oracle is a registered trademark of Oracle Corporation and/or its affiliates. Other names may be trademarks of their respective owners. 0109