

# ORACLE SOA SUITE

## KEY FEATURES

### Oracle BPEL Process Manager Features

- Process designer, process manager console, and process server
- Integration services
- Human workflow

### Oracle Business Activity Monitoring Features

- Web browser dashboard
- Business user authoring
- Embedded actions
- Real-time analytics

### Oracle Business Rules Features

- Business user authoring
- Small footprint engine
- Seamless integration
- Rules SDK

### Oracle Service Bus Features

- Multi-protocol ESB
- Configuration-driven integration
- Content and identity-based routing
- Policy-driven security
- Distributed ESB domains
- Superior QoS (RASP)

### Oracle JDeveloper Features

- Develop Web services
- Standards support for Web services

### Connectivity Features

- 300+ application adapters
- Legacy and technology adapters
- WSIF bindings
- B2B protocols
- RFID and other sensors

### Web Services Management Features

- Policy authoring and enforcement
- .NET and Java support

### Complex Event Processing Features

- Trend and pattern detection
- In-memory data manipulation
- Optimized, lightweight application server

*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 the development of enterprise applications as modular business services that can be easily integrated. Benefits include reuse, ease of maintenance and change, and improved business visibility.*

## Product Overview

Oracle SOA Suite is a comprehensive, hot-pluggable software suite for the building, deployment, and management of a service-oriented architecture. This includes service-oriented application development, service-oriented applications and IT systems integration, and service-oriented management of business processes. It plugs into heterogeneous IT infrastructures and enables enterprises to adopt SOA incrementally. The components of the suite benefit from common capabilities including a single deployment and management model, consistent tooling, end-to-end security, and unified metadata management.

Oracle SOA Suite improves an organization's ability both to predict change—by improving its visibility to happenings in the business environment in real time—and to respond to change—by allowing the organization to develop and optimize business processes rapidly. It simplifies the IT environment by being provisioned, deployed, monitored, and managed as a single cohesive infrastructure. It leverages existing investments by being modular, open, and extensible.

Oracle SOA Suite consists of the following components:

- a BPEL-based process manager to compose services into business processes
- a business activity monitoring solution to gain real-time visibility into operation and performance of business processes and services
- a business rules engine to capture and automate business policies
- a multi-protocol Oracle Service Bus to connect applications and route messages
- connectivity to virtually any data source including applications, databases, queues, RFID and other physical devices, as well as high volume high performance data integration
- Oracle JDeveloper, an Integrated Development Environment (IDE) to develop,

debug, profile, and deploy services

- a Web services management and security solution to enforce authentication and authorization policies on services
- a services registry for discovering and managing the lifecycle of services

### **Oracle BPEL Process Manager**

Oracle BPEL Process Manager provides a comprehensive, standards-based, and easy-to-use solution for creating, deploying, and managing cross-application business processes with both automated and human workflow steps. Oracle BPEL Process Manager features a graphical and user-friendly process designer, which is available as a plug-in to the Oracle JDeveloper or Eclipse environment providing a unified design time environment. User-friendly wizards are provided to simplify many common tasks such as connecting to IT systems and setting up human workflow steps.

Oracle BPEL Process Manager also includes a user-friendly Web-based console for management, administration, and debugging of deployed processes. Instance-level audit trails, process history, and process analysis/reports are available through the console.

Oracle's 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 integration services include support for extensible stylesheet language and XQuery transformations as well as bindings to hundreds of applications and legacy systems through JCA adapters and native protocols. Human workflow services such as task management, notification management, and worklist management are provided as built-in BPEL services 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 Activity Monitoring**

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

Oracle Business Activity Monitoring 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

also have the ability to take the appropriate corrective action from the dashboard on monitored events. For example, a user could launch a business process in Oracle BPEL Process Manager.

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

### **Oracle Business Rules**

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

Oracle Business Rules consists of a rule authoring tool, a rules engine, and a software development kit (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

### **Oracle Service Bus**

Oracle Service Bus is designed to connect, mediate, and manage interactions between heterogeneous services, legacy applications, packaged applications and multiple enterprise service bus (ESB) instances across an enterprisewide service network.

Oracle Service Bus enables configuration-driven service integration with intelligent content and identity-based routing. It enhances developer productivity due to code-free service integration. Oracle Service Bus also offers native transports for leading enterprise resource planning and packaged applications, together with connectivity to IBM WebSphere and IBM WebSphere MQ server-based applications. Oracle Service Bus Financial Services Edition offers Society for Worldwide Interbank Financial Telecommunication (SWIFT)-certified transports for SWIFT alliance and SWIFT gateway.

Oracle Service Bus delivers built-in capabilities for service virtualization, Web Service Security (WS-Security), and enforcement of policies around throttling and service pooling to meet the Reliability, Availability, Scalability and Performance (RASP) requirements and avoid overloading of the backend services. Oracle Service Bus is built from the ground with comprehensive support for SOA, Java 2 Platform, Enterprise Edition (J2EE), and standards such as J2EE Connector architecture (JCA) and WS-Reliable Messaging and WS-Security.

### **Oracle Web Services Manager**

Oracle Web Services Manager is a comprehensive solution for securing and managing service-oriented architectures. It enables security and identity management policies to be defined centrally and enforced globally.

Oracle Web Services Manager allows centralized definition of policies that govern Web services operations such as access, logging, and content validation, and wrapping of such policies around services with no modification to existing Web services. It includes a graphical policy manager tool for building, configuring, and publishing policies.

Oracle Web Services Manager collects monitoring statistics as policies execute and displays them in a graphical format in a monitoring dashboard. Administrators can set quality of service (QoS) levels for each application and Oracle Web Services Manager will display alerts when the application exceeds established targets. The monitoring dashboard functionality provides IT operations staff with real-time visibility into the health, performance, security, and utilization of Web services.

### **Oracle JDeveloper**

Oracle JDeveloper is an integrated development environment for building service-oriented applications using the latest industry standards for Java, XML, Web Services, and SQL. Oracle JDeveloper supports the complete development life cycle with integrated features for modeling, coding, debugging, testing, profiling, tuning, and deploying applications.

### **Connectivity**

Oracle's family of adapters enables connectivity to virtually any data source inside the enterprise, while Oracle's B2B protocols enable connectivity with trading partners. Oracle SOA uses Web services invocation framework (WSIF) bindings for working natively with Java, Enterprise JavaBeans, Java Message Service (JMS), and JCA services.

Oracle adapters are available for more than 300 packaged applications; for legacy and mainframes including Tuxedo, virtual storage access method (VSAM), customer information control system (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's B2B protocols enable an enterprise to exchange information electronically with its trading partners. It supports a rich set of industry standards including electronic data interchange (EDI), UCCnet, RosettaNet, CIDX, PIDX, VICS, ebXML, UBL.

### **Complex Event Processing**

Oracle's complex event processing (CEP) capabilities provide a rich, declarative environment for the development of event processing applications to improve the efficiency and effectiveness of managing business operations. Today's IT environments generate continuous data streams from systems that monitor

## KEY BENEFITS AND RELATED PRODUCTS

### BENEFITS:

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 Oracle SOA Suite allows seamless integration of the suite or its components into any existing IT environment. Since the best-of-breed components of Oracle SOA Suite may be adopted incrementally, they can be used to solve identified business problems and expanded to enterprise deployments.

### RELATED PRODUCTS:

- Oracle Event-Driven Architecture Suite
- Oracle's SOA governance solution
- Oracle Data Integration Suite
- Oracle Business Process Management Suite
- Oracle Portal
- Oracle Identity Management
- Oracle Application Development Framework
- Oracle Business Intelligence

everything from financial markets to network performance to business process execution to radio frequency identification (RFID)-tagged assets. Oracle's CEP capabilities can process multiple event streams to detect patterns and trends at real time and provide enterprises the necessary visibility via Oracle Business Activity Monitoring to capitalize on emerging opportunities or mitigate developing risks. The CEP engine runs atop a highly optimized, light weight application server that can handle hundreds of thousands of events per second.

### Oracle Enterprise Manager SOA Management Pack

When deployed with Oracle Application Server, Oracle SOA Suite components can leverage Oracle Enterprise Manager SOA Management Pack as the complete management solution for applications and infrastructure in a service-oriented architecture. Oracle Enterprise Manager SOA Management Pack delivers value out of the box with a fully centralized management console. Using it, administrators can easily correlate events and activities for all components across the SOA environment to resolve performance and availability issues faster. With a rich set of service and system level dashboards, administrators can view service levels for key business processes and SOA infrastructure components from a central location.

### Contact Us

For more information about Oracle SOA Suite please visit [oracle.com/soa](http://oracle.com/soa) or call +1.800.ORACLE1 to speak to an Oracle representative.

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