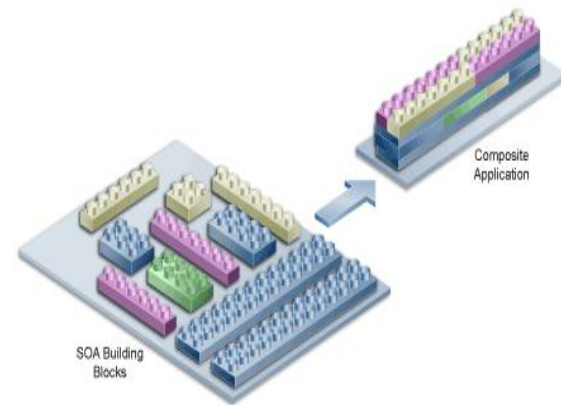


SERVICE ORIENTED ARCHITECTURE

Introduction

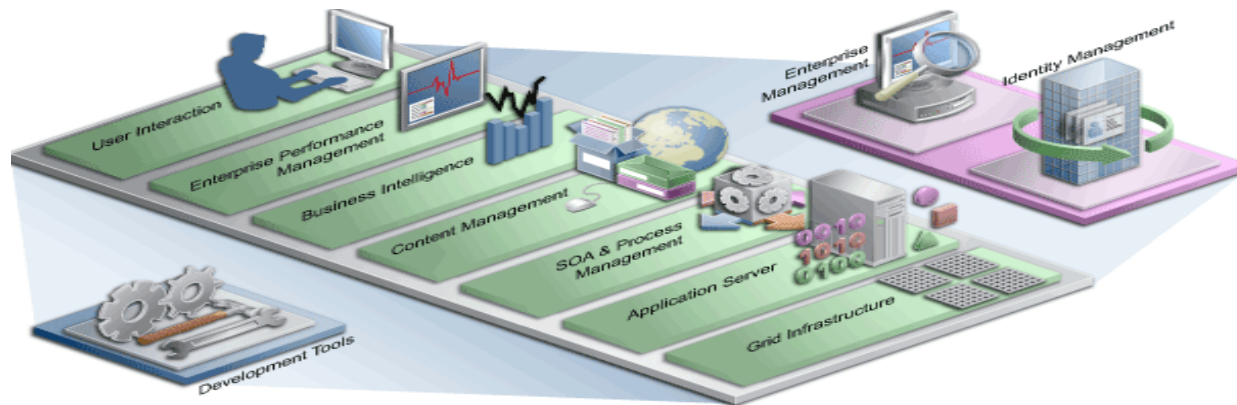
- SOA provides an enterprise architecture that supports building connected enterprise applications to provide solutions to business problems.
- SOA facilitates the development of enterprise applications as modular business web services that can be easily integrated and reused, creating a truly flexible, adaptable IT infrastructure.
- You can move and reconfigure pieces, turning your systems into the IT equivalent of Lego blocks.



ORACLE SOA 11G

Oracle SOA 11g

- Middleware layer of Oracle Fusion Middleware
- Provides service infrastructure components
 - Designing
 - Deploying
 - managing composite applications
- Easy assembly of multiple technology components into one SOA composite application
- Oracle SOA Suite plugs into heterogeneous IT infrastructures



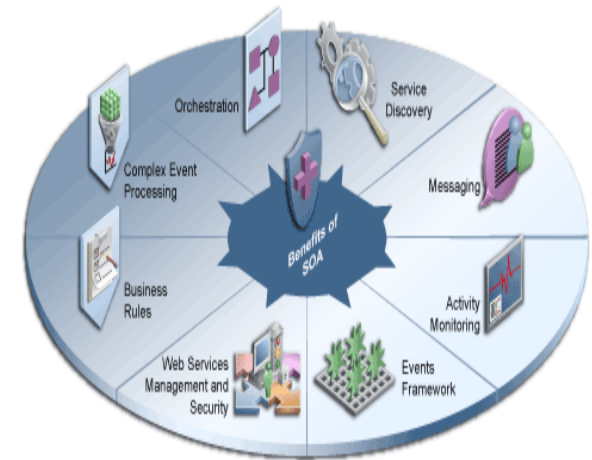
Oracle SOA Suite

The components of Oracle SOA Suite benefit from common capabilities, including :

- a single deployment
- management
- tooling model
- end-to-end security
- unified metadata management

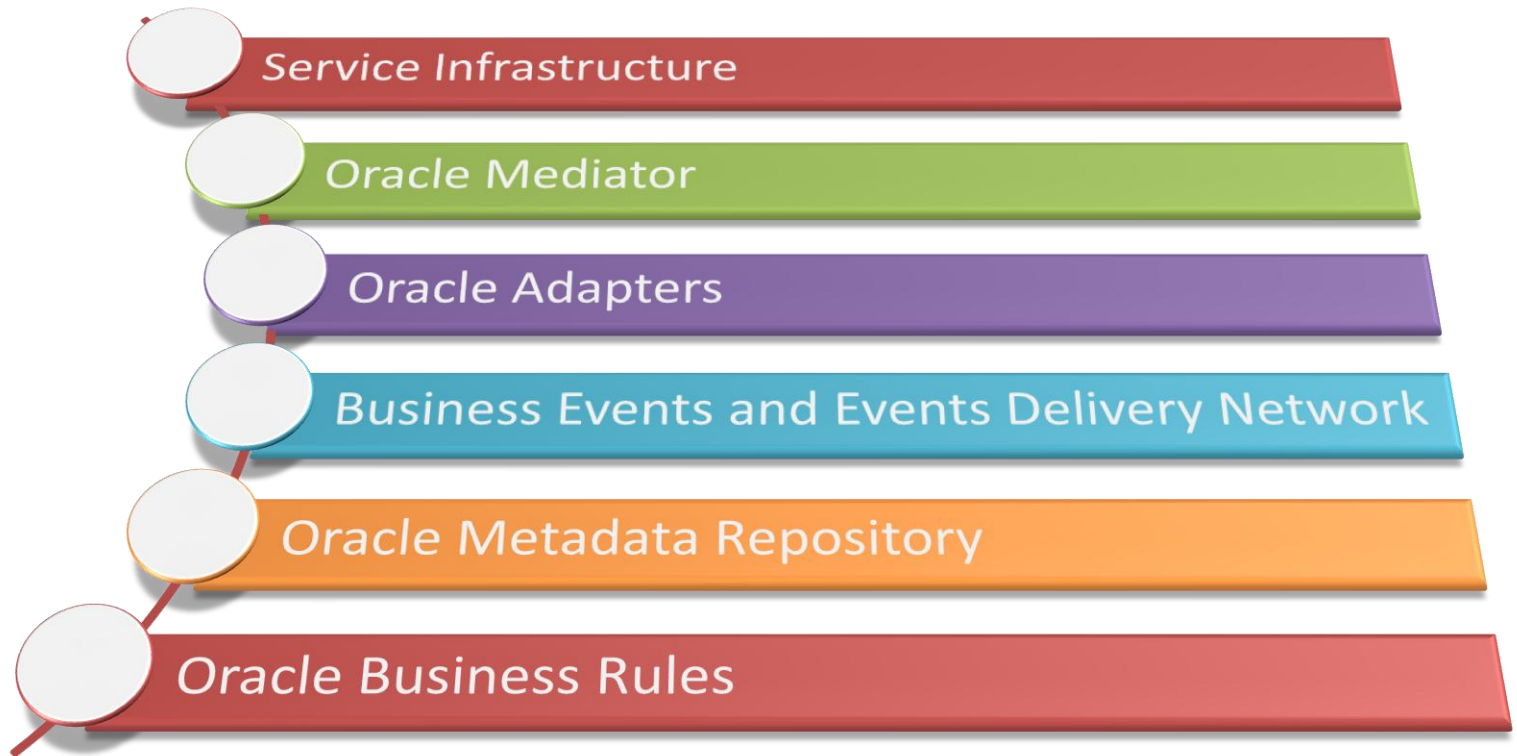
Oracle SOA Suite is unique in that it provides the following set of integrated capabilities:

- Messaging
- Service discovery
- Orchestration
- Web services management and security
- Business rules
- Events framework
- Business activity monitoring

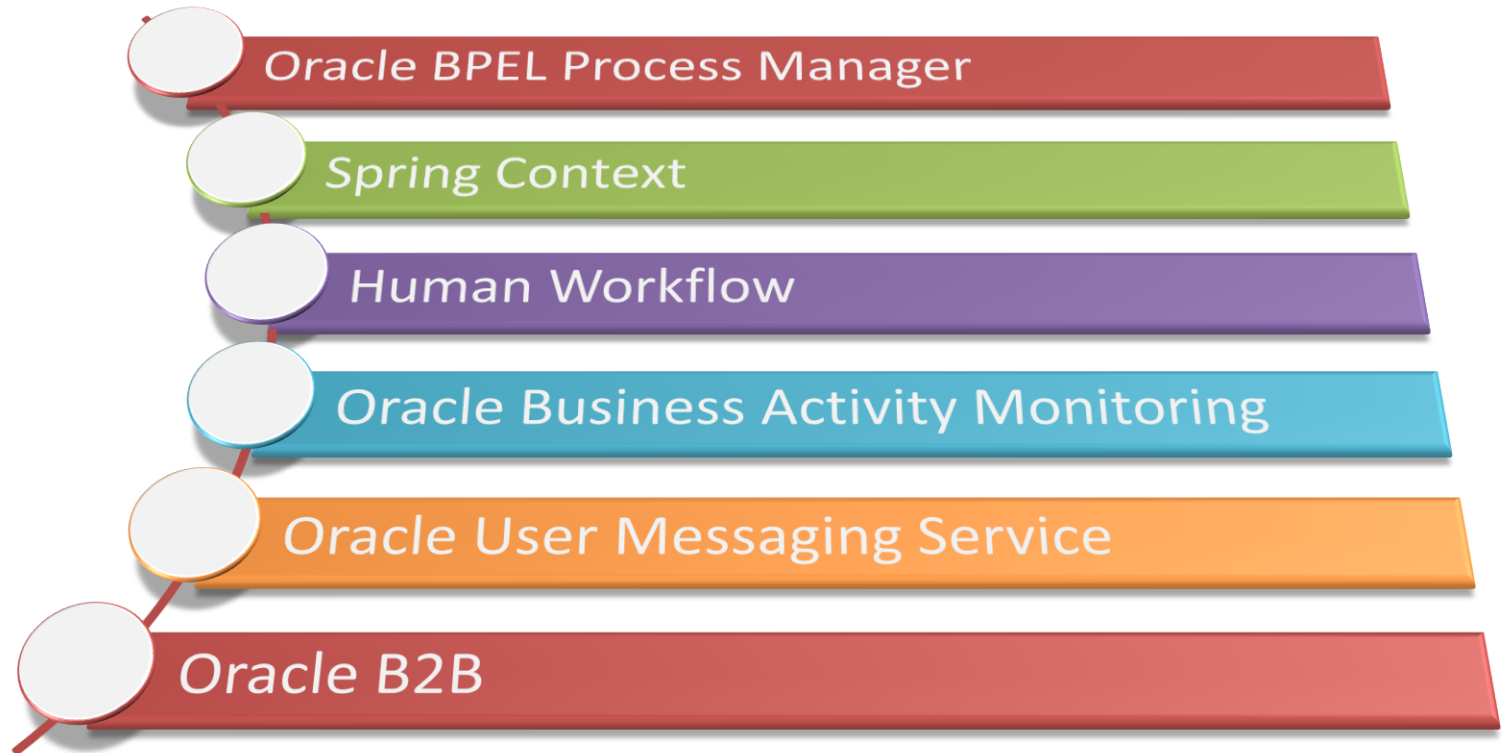


SOA SUITE COMPONENTS

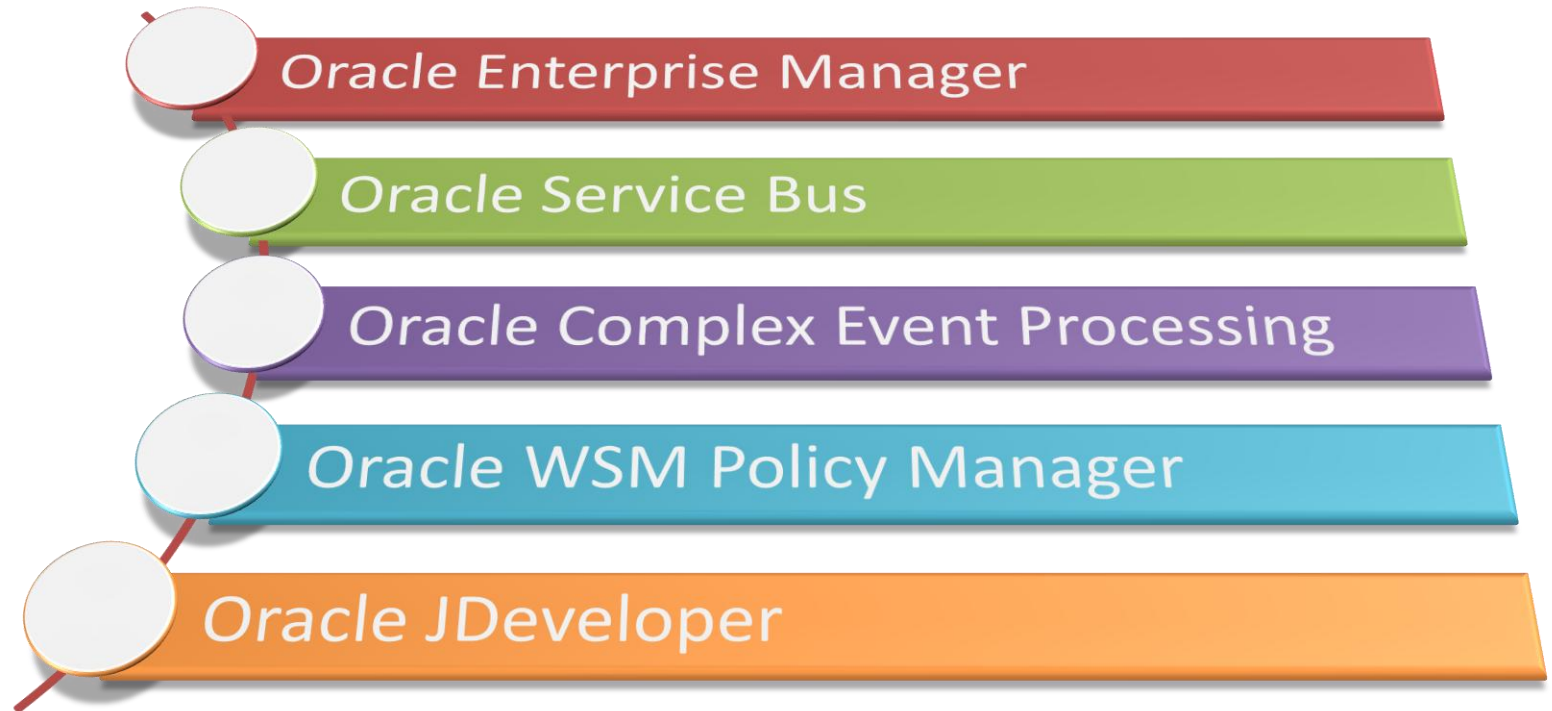
Oracle SOA Suite Components



Oracle SOA Suite Components

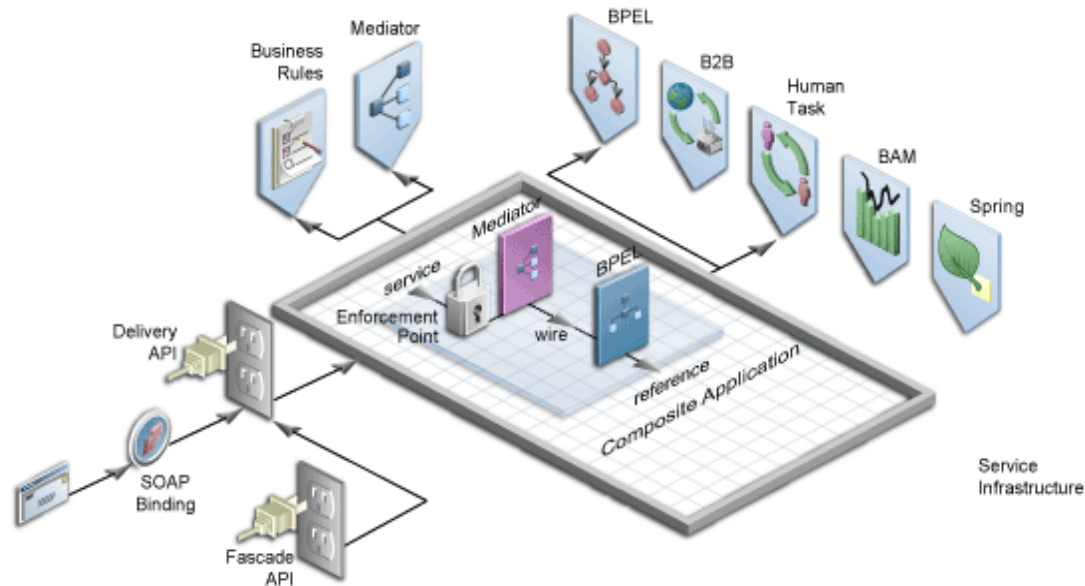


Oracle SOA Suite Components



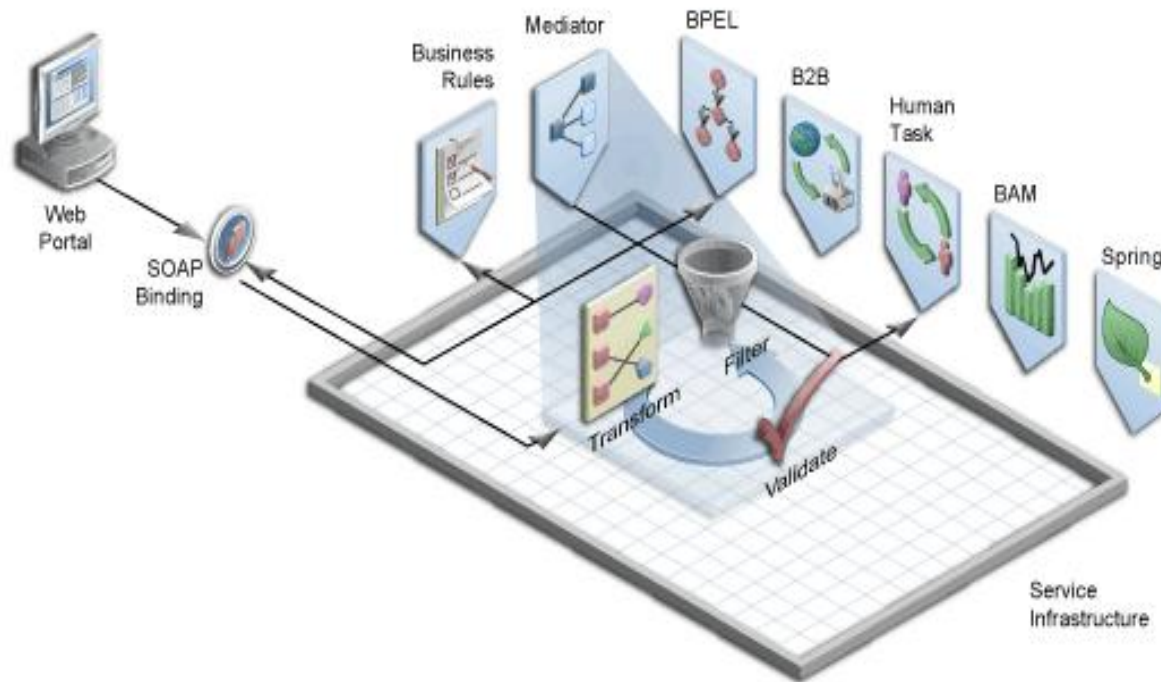
Service Infrastructure

The Service Infrastructure provides the internal message routing infrastructure capabilities for connecting components and enabling data flow



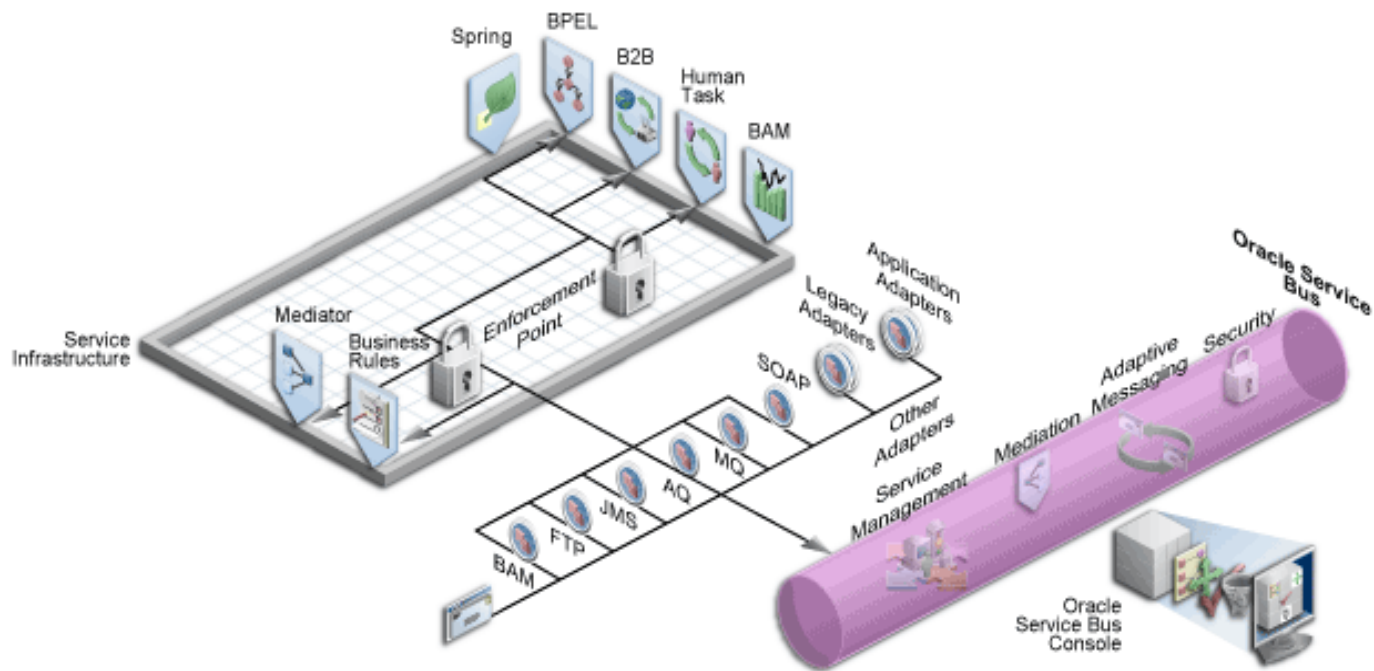
Oracle Mediator

Oracle Mediator routes data from service providers to external partners.



Oracle Adapters

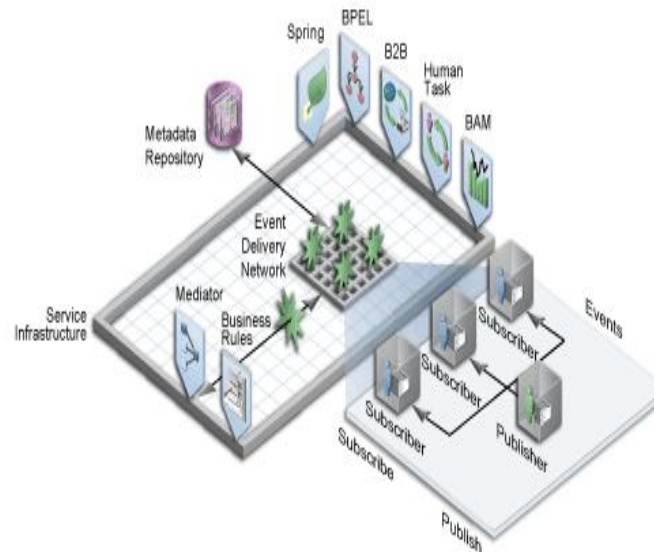
Oracle Adapters use JCA technology to connect external systems to the Oracle SOA Suite.



Business Events and Events Delivery Network

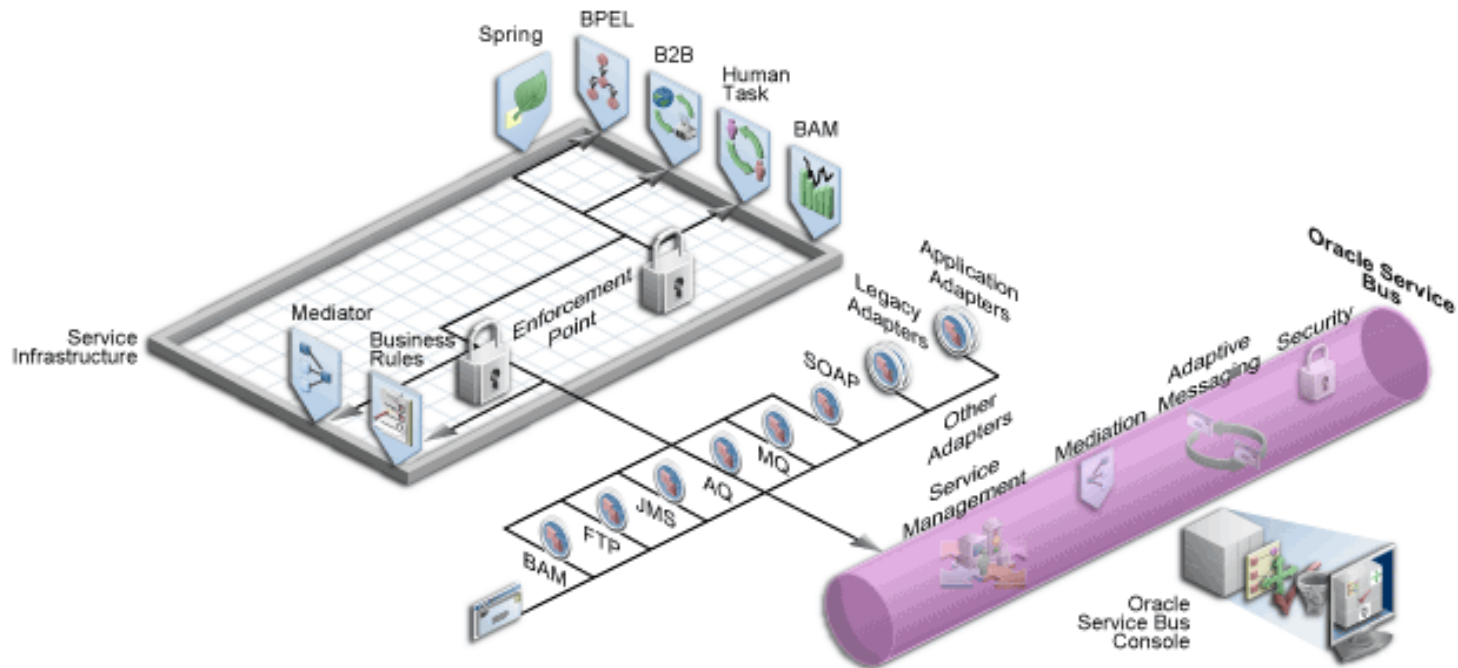
Business events are messages sent as the result of an occurrence or situation, such as a new order or completion of an order.

The mediator service component subscribes or publishes events



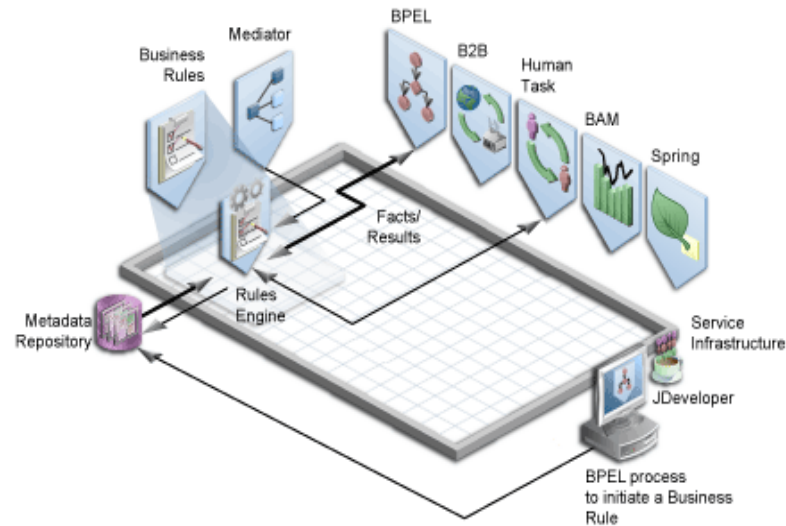
Oracle Metadata Repository

Business events are sent as occurrence or situation, such as a new order or completion of an order. In Oracle SOA Suite, the mediator service component subscribes or publishes events



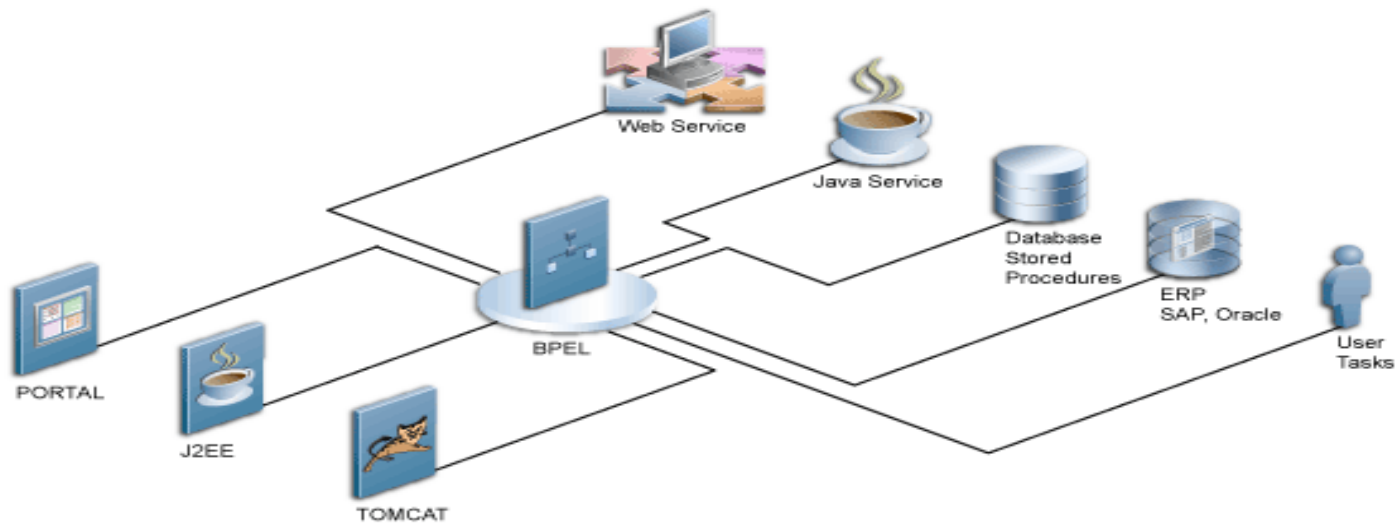
Oracle Business Rules

- More agile rule maintenance
- Empowers to modify rule logic without programmer assistance without interrupting business processes.



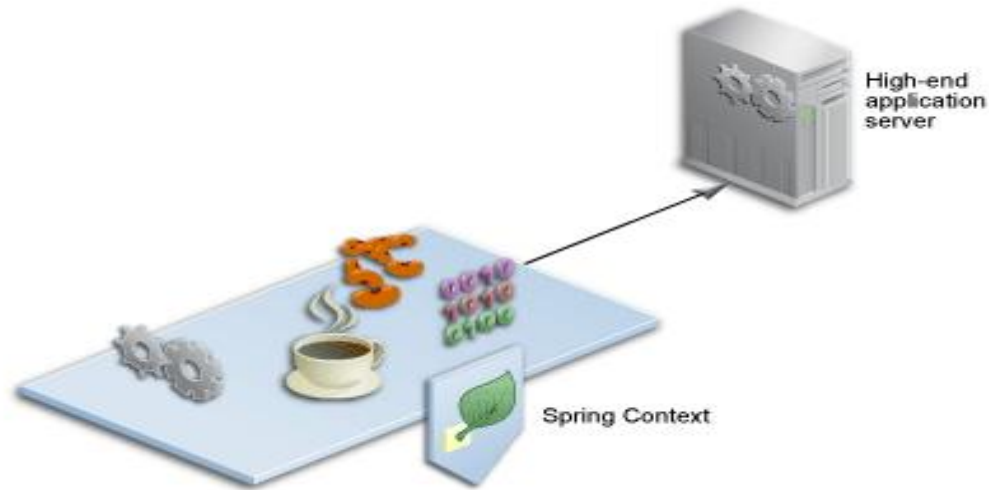
Oracle BPEL Process Manager

- Oracle BPEL Process Manager enables you to orchestrate synchronous and asynchronous services into end-to-end BPEL process flows



Spring Context

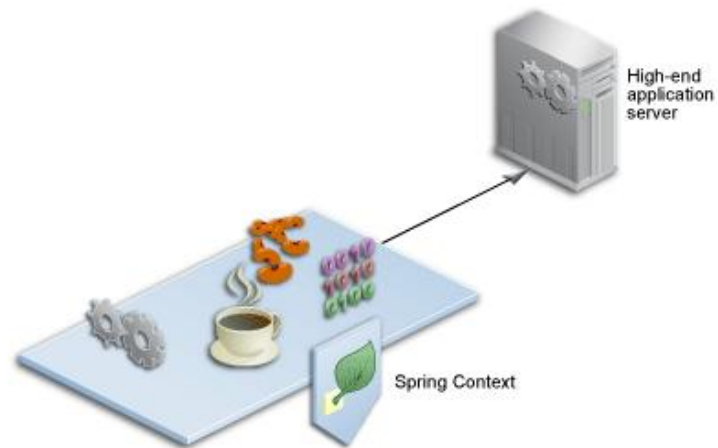
- Oracle SOA Suite provides support for the spring framework functionality of the WebLogic Service Component Architecture (SCA) of Oracle WebLogic Server



Human Workflow

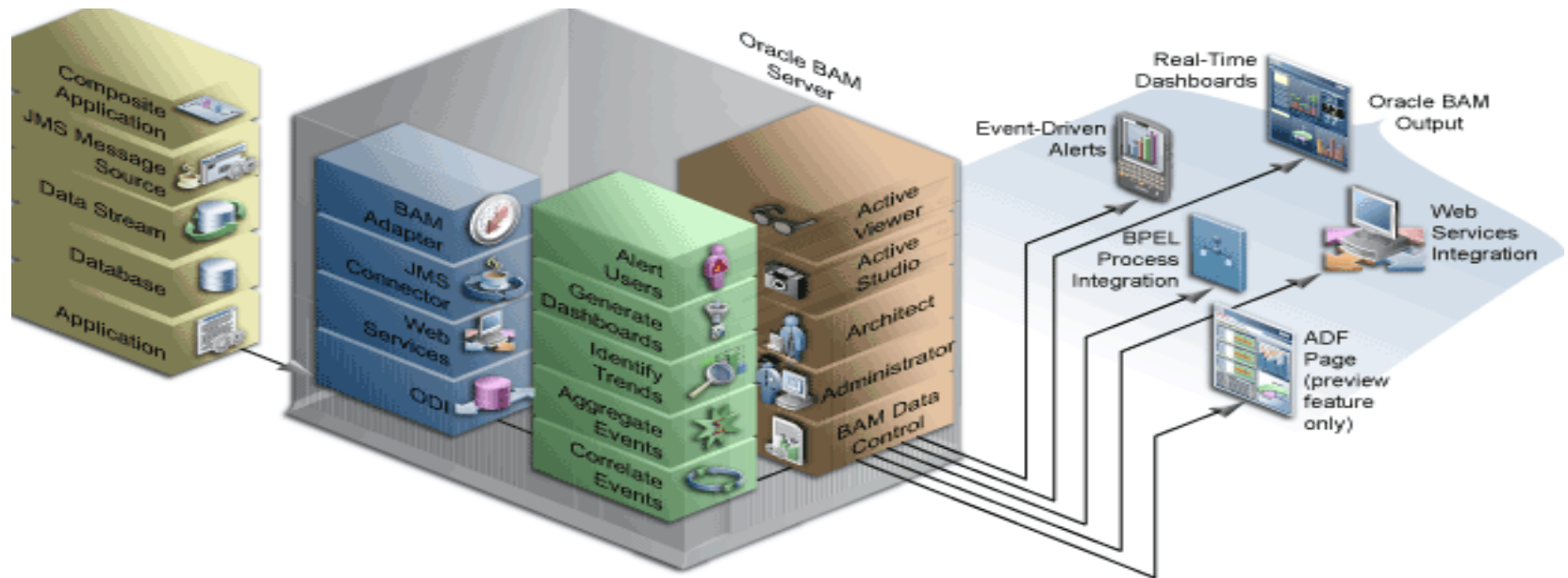
Business processes require human interactions with the process.

- Humans may be needed for approvals
- Exception management
- Performing activities required to advance the business process



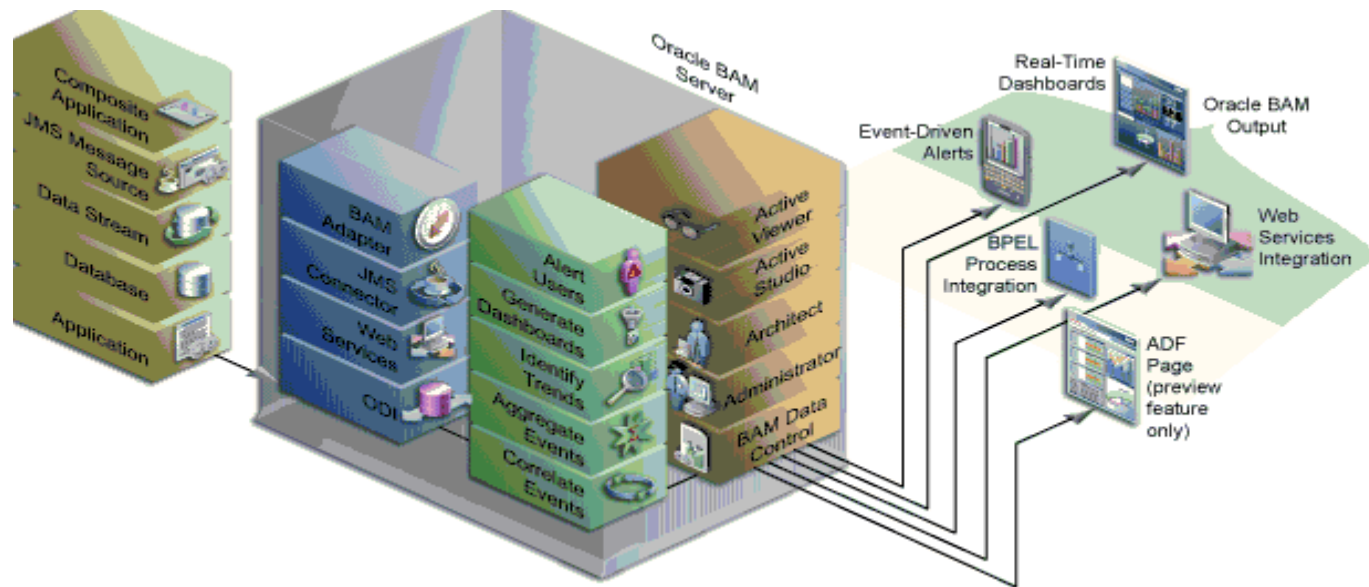
Oracle Business Activity Monitoring

Oracle Business Activity Monitoring (Oracle BAM) is a complete solution for building real-time operational dashboards and monitoring and alerting applications over the Web



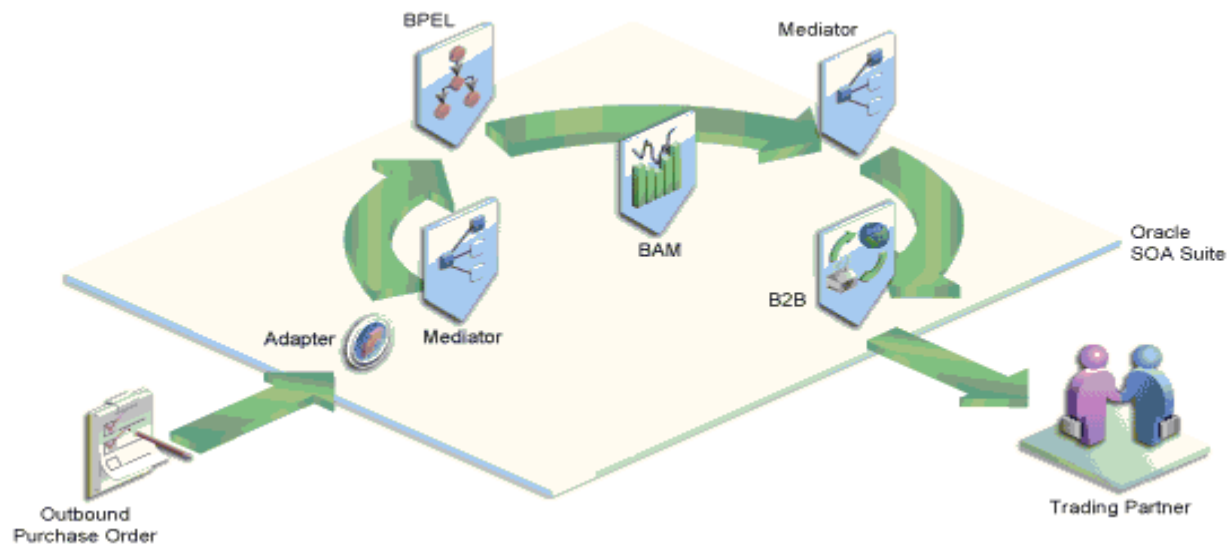
Oracle User Messaging Service

Oracle User Messaging Service provides a common service responsible for sending out messages from applications to devices. It also routes incoming messages from devices to applications



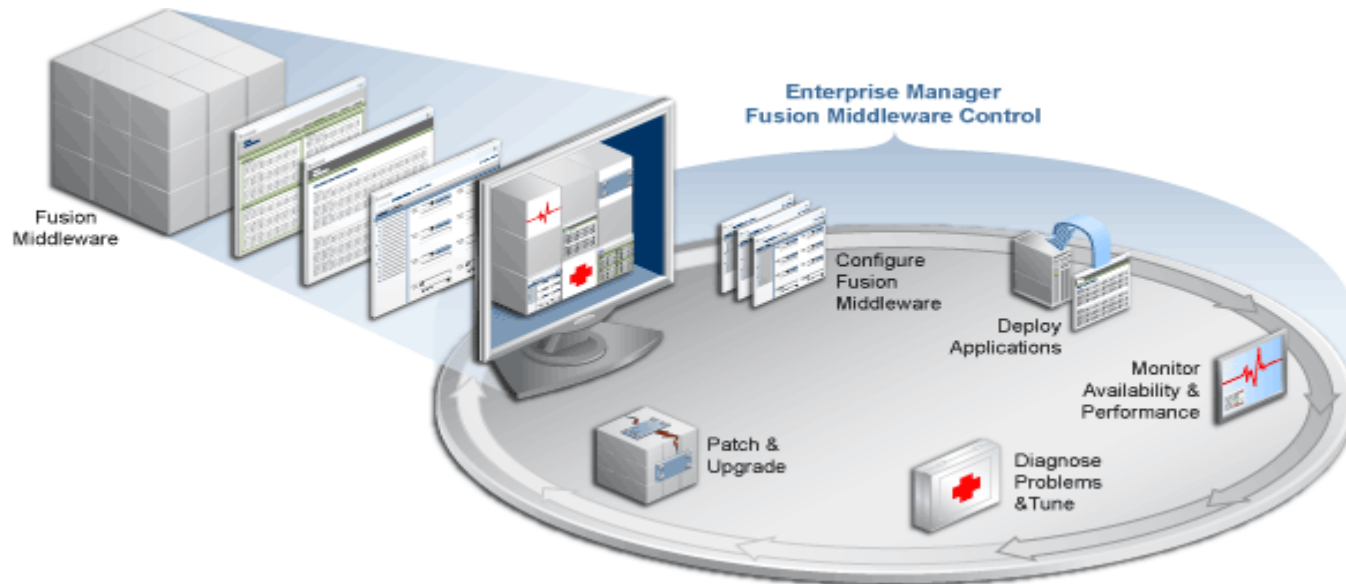
Oracle B2B

- eCommerce gateway that enables secure and reliable exchange of messages between an enterprise and its trading partners.
- binding component of the Oracle SOA Suite and this platform enables the implementation of complete end-to-end eCommerce business processes



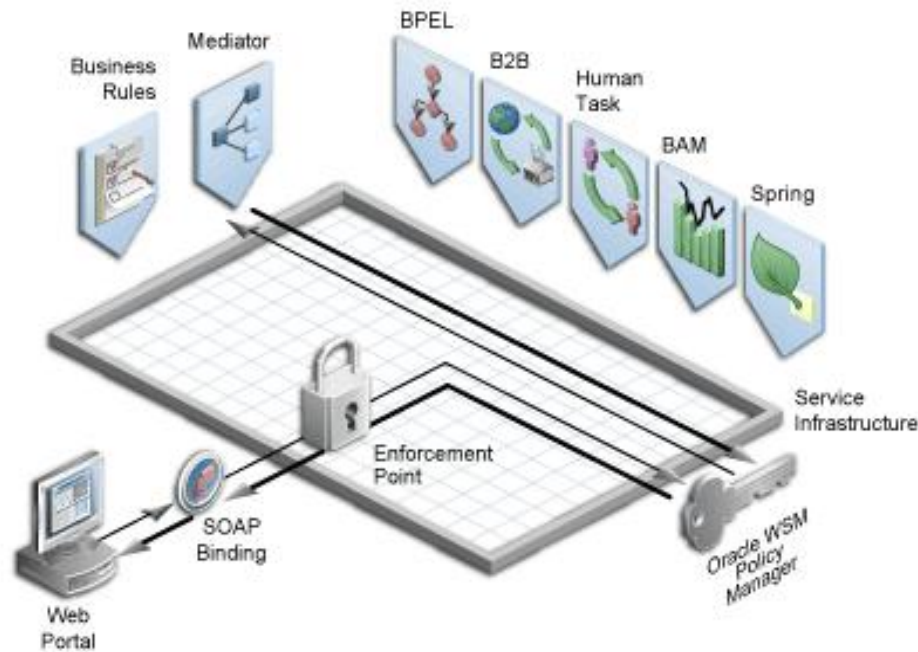
Oracle Enterprise Manager

- You can configure, monitor, and manage your SOA composite application during run time from Oracle Enterprise Manager Fusion Middleware Control Console.
- Fusion Middleware Control is a Web browser-based, graphical user interface that you can use to monitor and administer a farm.



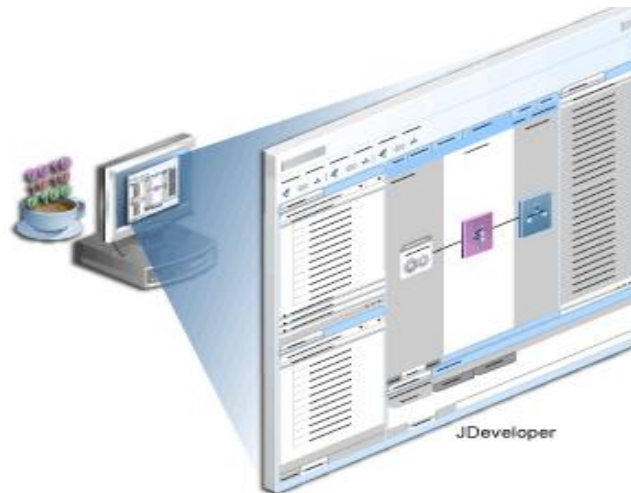
Oracle WSM Policy Manager

Provides the infrastructure for enforcing global security and auditing policies in the Service Infrastructure. By securing various endpoints and setting and propagating identity, it secures applications



Oracle JDeveloper

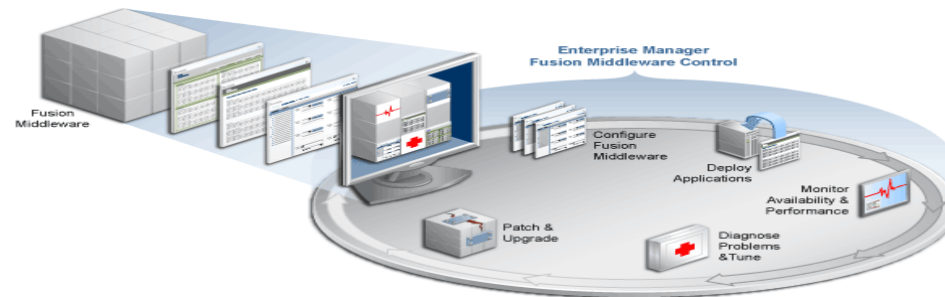
- Oracle JDeveloper is the development component of Oracle SOA Suite.
- Integrated Service Environment (ISE)
 - creating and deploying composite applications
 - managing the composite.
 - model, create, discover, assemble, orchestrate, test, deploy, and maintain composite applications based on services.



Life Cycle of a SOA Composite Application

The basic life cycle of a SOA composite application is as follows:

- Use Oracle JDeveloper to design a SOA composite application with various SOA components.
- Package the composite application for deployment.
- Deploy the SOA composite application to the SOA Infrastructure. The SOA Infrastructure is a Java EE-compliant application running in Oracle WebLogic Server. The application manages composites and their life cycle, service engines, and binding components.
- Use Oracle Enterprise Manager Fusion Middleware Control to monitor and manage the composite application for a farm's SOA infrastructure.



SOA Composite Application Architecture

A SOA composite is an assembly of services, references designed and deployed together in a single application

- Services: Services provide the outside world with an entry point to the SOA composite application
- References: References enable messages to be sent from the SOA composite application to external services in the outside world.
- Wires: Wires enable you to graphically connect the following components in a single SOA composite application for message communication
 - Services to service components
 - Service components to other service components
 - Service components to reference

Interoperability with Other Oracle Products

You can use the following separately licensed products with Oracle SOA Suite:

- Oracle Service Registry
- Other Adapters
- Oracle SOA Governance Suite
- Oracle Business Process Management Suite
- Oracle Business Process Analysis Suite
- Oracle Event-Driven Architecture Suite
- Oracle Data Integrator
- Oracle Business Intelligence

