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FUSION MIDDLEWARE
SERVICE BUS

ORACLE SERVICE BUS

A proven, lightweight integration Enterprise Service Bus (ESB), Oracle Service Bus simplifies integration and improves time-to-market for new business services by replacing complex point-to-point integrations with a single service virtualization connection. Instead of disparate integration toolkits throughout your enterprise, Oracle Service Bus delivers a common standards-based integration solution spanning public cloud, private cloud, and on-premises applications and services. Oracle Service Bus allows you to achieve value more quickly with simple, code-free, configuration-based integration and supports rapid mobile enablement of smartphones and tablets.

KEY FEATURES

- Mobile enablement REST support
- Unifies cloud and on-premises applications and services with a single Enterprise Service Bus
- Embedded access to service result caching to eliminate latency for data-oriented services
- Automated SOA governance synchronization
- Intelligent content and identity-based routing
- Rich set of JCA adapters
- Smart, optimized transports to ERP and WebSphere MQ-based applications
- Dynamic message transformation and streaming
- Built-in monitoring, management, and QoS
- Configuration-driven service integration
- Optimized, pluggable, policy-driven transport and message security
- Enhanced standards leadership via WS-RM and WS-Security

KEY BENEFITS

- Reduced integration complexity and cost
- Extreme performance and unlimited scalability
- Improved control and visibility
- Improved developer productivity
- Reduced support and maintenance cost
- Faster time-to-market for new services

Overview

The current economic conditions and rapid changes in business environment require businesses to adapt quickly while reducing costs in the longer term. Companies, large and small, have embraced shared service infrastructure to gain competitive advantage. Shared service infrastructure allows consistent Quality of Service (QoS), security and performance policies across the enterprise while increasing operational efficiency. As these mission-critical business processes and service components are used by a large number of internal and external applications, companies realize only a flexible and scalable shared service infrastructure will allow them to meet the demanding service levels required to compete in today's business environment.

Ease the Transition to Shared Services Infrastructure

Two of the most important questions businesses are asking themselves when launching new application infrastructure projects are:

1. What steps do we need to take to elevate our initial "services infrastructure" into a "shared services infrastructure" supporting spikes in loads, improving high service availability, introducing agility, and simplifying manageability?
2. As our infrastructure begins to expand beyond our firewalls to incorporate more third-party cloud services into mission critical projects, are we prepared to manage the increase in service response latency time and risk?

Oracle Service Bus—an integral part of Oracle SOA Suite—is the market-leading and fastest growing enterprise service bus (ESB). Oracle Service Bus is designed to connect, mediate, and manage interactions among heterogeneous services, legacy applications, and multiple enterprise service bus instances across an expanding service network with built-in support for high performance and low risk incorporation of cloud services. It performs end-to-end governance and management by automatically synchronizing Oracle's SOA governance solution. It offers unparalleled QoS through unique policy-based service virtualization, service pooling, and throttling capabilities that meet the demands of high-volume SOA projects.

As businesses move from small departmental footprints to enterprise-wide SOA, they need to

use the services distributed across multiple SOA domains to build high-value composite applications. Unlike other ESBs, Oracle Service Bus offers integrated service governance and management capabilities across multiple SOA domains to enable consistent QoS, control, and visibility, ensuring reuse across the enterprise-wide service network.

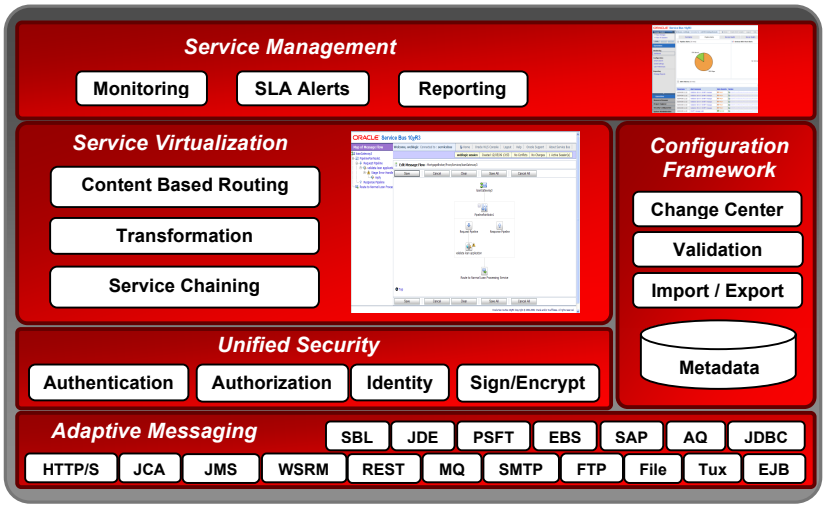

Figure 1. The principal functional areas of Oracle Service Bus are illustrated here.

Enhance Governance and Management of Shared Services

Oracle Service Bus is the first solution to combine service integration, messaging, operational service management, and security-enforcement capabilities. Unlike other vendors that require multiple products to ascertain the health of services, Oracle Service Bus provides built-in monitoring capabilities, including comprehensive dashboards displaying service-level agreement (SLA) alerts, operational metrics, and message pipelines for the business services it hosts.

Oracle Service Bus enhances the governance and management of your SOA through out-of-the-box seamless integration with Oracle Web Services Manager, Oracle Enterprise Repository, Oracle Service Registry, and Oracle Enterprise Manager SOA Management Pack as part of Oracle's SOA Governance solution. In contrast to traditional ESBs in which service governance is manually managed in disparate governance tools as an afterthought, Oracle Service Bus automatically synchronizes service governance throughout the entire service lifecycle from design, development, deployment, and runtime with the Oracle Enterprise Repository. This new level of integration between the ESB and governance ensures a key ESB benefit of architectural flexibility comes with a reduction in errors and faster time to market for new services.

Build Your Integration Foundation on the Industry's Most Scalable ESB

Oracle Service Bus provides extreme performance and scalability for all dimensions of your architecture. Applications need to scale in many dimensions—vertically, horizontally, with user numbers, and with message size. Scalability with an increasing number of services is an important and often ignored dimension of SOA architectures. Oracle Service Bus has the ability to scale easily to thousands of services, via sophisticated techniques such as preprocess parsing to split large messages into smaller packets, as well as near linear scalability on clustered deployments.

Highlights of Oracle Service Bus

Oracle Service Bus provides enhanced productivity, modern service patterns, and services within a wider infrastructure.

Enhanced Productivity

Oracle Service Bus enhances productivity by providing visual debugging capabilities 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 allows granular logging of messages exchanged at run time between transports, applications, and data endpoints. Logging can be conducted without server restarts, thereby shortening time for problem diagnosis and resolution. By allowing service definition and monitoring, pipeline and action level metrics enable a proactive and empirical approach to bottleneck identification and performance tuning.

As well as its own IDE, Oracle Service Bus also offers a full-fledged Web-based design environment, allowing shared service administrators to take corrective actions at anytime, anywhere with a simple Web browser. Furthermore, all edits are tracked and can be reviewed or rolled back at anytime—an absolute requirement in production environments.

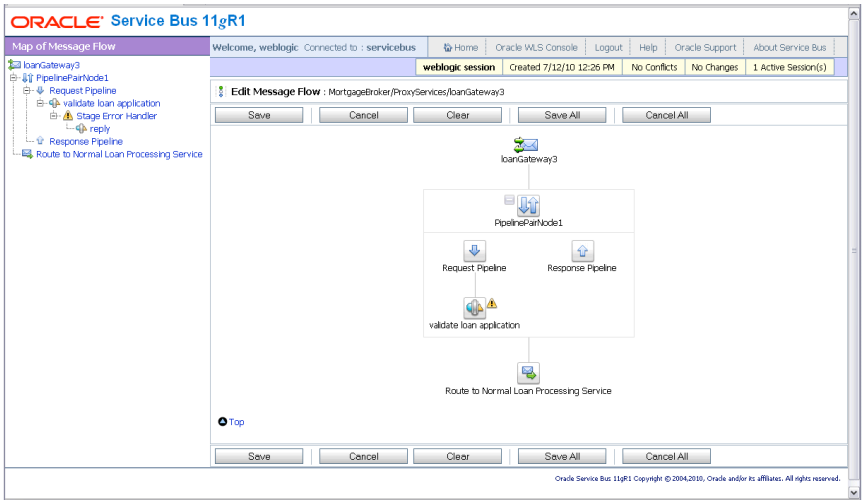

Figure 2. Oracle Service Bus features a lightweight Web-based design console.

Modern Service Patterns

Traditional Web services required service consumers and service providers to agree upon an interface contract, expressed using Web Services Description Language (WSDL), for message or data exchange via SOAP. To facilitate data exchange with external systems, Oracle Service Bus can handle 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). With Oracle Service Bus, developers can easily transform existing services into REST style services thereby avoiding extensive programmatic changes.

Services in a Wider Infrastructure

Oracle Service Bus supports an unprecedented level of heterogeneity and can reliably connect any service by leveraging standard protocols and providing a service oriented approach to integrating enterprise information systems (EIS), such as enterprise resource planning (ERP) systems, letting EIS applications and services participate in the service bus environment through Oracle JCA Adapters.

Oracle Service Bus delivers a unique approach to eliminating latency times associated with

frequent access of static back-end data with an easy to use, single-click enablement of service result caching, by embedding access to Oracle Coherence, the industry's leading distributed in-memory data grid solution, directly into Oracle Service Bus.

Platforms and Requirements

For up to date information on platforms and requirements, please see the documentation for Oracle Service Bus on the Oracle Technology Network (OTN) under "Supported System Configurations"

Contact Us

For more information about Oracle Service Bus, visit oracle.com or call +1.800.ORACLE1 to speak to an Oracle representative.

Oracle is committed to developing practices and products that help protect the environment

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