IBM

WebSphere® software

Delivering a platform-independent based ESB for universal connectivity and transformation in heterogeneous IT environments.

The evolution of application integration

Market conditions and business requirements are changing rapidly. Unpredictable market forces such as mergers and acquisitions, expanding regulatory requirements and globalization can inhibit revenue growth. The costs of maintaining applications and solutions that have been accumulating over the years can drain your budget.

To keep pace with the speed of business, you need to enable all your applications to communicate with one another—regardless of programming languages, system platforms, programming models, protocols or data formats.

Many companies have turned to a service oriented architecture (SOA) to integrate the applications behind business processes as linked and repeatable business tasks and services. An enterprise service bus (ESB) is the entry point for SOA.

An ESB enables your business to make use of a comprehensive, flexible and consistent approach to application integration while reducing the complexity of the applications. Because of the complex and varying nature of business needs, an ESB is an evolutional progression that unifies message-oriented, event-driven and service-oriented approaches for integrating applications and service.

Different types of ESBs are emerging, all providing different functions. Multiple ESB configurations and topologies are likely to be present as organizations roll out SOA infrastructures. Acquisitions and mergers are also contributing to the multiple ESB requirements.

It's important to develop a coordinated, heterogeneous, federated approach to managed disparate SOA domains and ESBs. Policy management, such as the management of the resources, security needs and overall management of the multiple ESBs, will be critical for a successful deployment.

Building an ESB is one of the quickest and most cost-effective ways to address the challenge of application integration.

WebSphere Message Broker: A platform-independent based ESB

IBM WebSphere® Message Broker is a universal ESB—an ESB without limits in terms of expanded, extendable capabilities and flexibility. Built on top of IBM WebSphere MQ, it immediately brings guaranteed deliverability, security and scalability. But beyond providing basic message transport, Message Broker can function as a complete integration hub by performing a wide range of transformation operations on message data, and apply rules and policies in flight. And it can do all this in a highly robust operating environment, delivering high scalability and throughput, hot deployment of updates, and ease of management for even very large deployments.

Ultimately, Message Broker 6.1 can connect everything inside and outside the enterprise, both SOA- and non-SOA-based systems. It allows an enterprise to not only effectively connect and integrate its own disparate systems, but also those of its outside partners and customers. With built-in Java™ 2 Platform, Enterprise Edition (J2EE) Connector architecture (JCA) adapter nodes and file processing, Message Broker can simplify management and improve performance for key integration scenarios.

Universal connectivity

With WebSphere Message Broker, your business can simplify application connectivity to provide a flexible and dynamic infrastructure. WebSphere Message Broker is a platform-independent based ESB that provides universal connectivity and transformation spanning across heterogeneous IT environments.

With its robust design, scalable architecture, high performance and usability, WebSphere Message Broker can implement an enterprise-wide SOA in stages to reduce risks. This flexible combination of capabilities provides your business with the tools to solve your integration requirements from any starting point: a simple two-application solution or a multi-application, multi-platform design. As your business expands and the integration challenges multiply, WebSphere Message Broker can accommodate the changing needs of your business by:

- *Growing your infrastructure without increasing the complexity*
- *Protecting your existing and ongoing investments in applications and data structures*
- *Seamlessly extending your connectivity capabilities*
- *Supporting Web services, including security concerns*

WebSphere Message Broker is the cost-effective solution for your enterprise's extensive integration and mediation needs today and will protect your investment into the future.

Anywhere-to-anywhere message routing and transformation

WebSphere Message Broker provides the key capabilities your business needs to transform and route your business data between applications. It can function as a message and protocol switch. This enables you to connect disparate applications and business data across multiple platforms and to provide transformation and intelligent routing capabilities for all your business information. It makes business data available exactly where you want it in the format you need it.

GROHE enjoys integrated solutions on tap with IBM service-enabling software

A company specializing in water-technology solutions, GROHE was challenged with integrating older applications with newer SAP modules for a new SAP enterprise resource planning (ERP) system. To complete the project quickly, the company chose IBM WebSphere business-integration software for its easy-to-use developer interface. In addition, the IBM company SERCon GmbH provided application-development support.

The ESB solution for SAP integration included WebSphere Message Broker software. The solution:

- *Decreased average integration time by up to 84 percent (two to four weeks versus up to six months).*
- *Reduced time and cost for integrating existing applications with new SAP modules compared to a hand-coded, point-to-point integration technique.*
- *Gained more reliable and highly available data transfers.*
- *Service-enabled historical systems for reuse of assets on demand.*

"Using the older method of point-to-point integration, it would have taken up to six months to program one interface," said Armin von Dolenga, Software Manager, GROHE AG. "With the IBM WebSphere integration solution, it took two months to complete all 14 projects. This was a stunning success for our team and our company."

HypoVereinsbank connects systems, offering new services

The Corporates and Markets line of business (LOB) of HypoVereinsbank needed to integrate its IT infrastructure to improve its ability to address customer demands and respond to market opportunities.

With help from IBM Global Business Services, IBM Software Group and IBM Business Partner Steria Mummert Consulting, the HVB Information Services GmbH department deployed an ESB infrastructure based on IBM Tivoli® and IBM WebSphere software.

The integration solution acts as a cost-effective connection environment that simplifies the trading process. HVB achieved a 35-percent reduction in the time required to design and implement integration scenarios used to link existing and new applications with internal and external information systems.

"The ESB provides a flexible infrastructure for HVB's agile investment banking," said Michael Dietze, Head of Business Development, HypoVereinsbank AG. "Our business is changing very fast, and the ESB enables us to support upcoming business opportunities immediately by connecting new market places and new dealing systems to our existing system landscape. The ESB accelerates the adaption of new business processes and the launch of new products and services."

WebSphere Message Broker routes and transforms messages from anywhere, to anywhere. It supports a wide range of protocols, including MQ, JMS 1.1, HTTP(S), Web Services, File and user-defined. It also supports a broad range of data formats, including binary, XML, industry, user-defined interactions and operations (such as route, filter, transform, enrich, monitor, distribute, decompose and correlate). Binary formats include C and COBOL. Industry formats include Society for Worldwide Interbank Financial Telecommunication (SWIFT), Electronic Data Interchange (EDI) and Health Insurance Portability and Accountability Act (HIPAA).

Security

With growing concerns about security and regulatory compliance, it's important that your ESB addresses these issues. Message Broker has a powerful runtime security model that supports cross-domain security processing. Identity authentication and authorization are native capabilities.

Simplify programming

WebSphere Message Broker is optimized to accommodate any IT environment with support for an array of application and middleware technologies. It exploits the industry-leading WebSphere MQ messaging infrastructure and supports a broad range of transport protocols. It supports a wide range of data formats and provides numerous ways to customize mediation. It uses a simple programming model for connectivity and mediation, including a robust set of prebuilt mediation functions. It offers a wide range of transformation options with graphical mapping, Java, extended Structured Query Language (ESQL), XSL, high-performance XML parsing and IBM WebSphere Transformation Extender. WebSphere Message Broker provides extensive administration and systems-management facilities for developed solutions, and offers the performance of a traditional transaction-processing environment.

With WebSphere Message Broker, you can simplify message flows to describe application connectivity comprising:

- *Message nodes, which encapsulate required integration logic*
- *A message tree, which describes the data in a format-independent manner*
- *Transformation options, including graphical mapping, Java, ESQL, XSL and WebSphere Transformation Extender*

Operational management and performance

WebSphere Message Broker provides extensive administration and systems-management facilities for developed solutions. Within one hour, it can be installed and running a simple sample. Simple packaging allows easy identification of appropriate installed assets. WebSphere Message Broker is supported on a broad range of operating systems and hardware platforms, including IBM AIX®, HP-UX (PA-RISC, Itanium®), Linux® on Intel®, Linux on IBM POWER™, Linux on IBM System z™, Sun Solaris (x86-64 and SPARC), Microsoft® Windows® and IBM z/OS®. All Linux and UNIX® platforms have 64-bit capability.

For more information

To learn more about IBM WebSphere Message Broker, contact your IBM representative or visit:

ibm.com/software/integration/wbimessagebroker/

St.George Bank saves US$15 million through reuse of key business functions

During the second half of the 1990s, St.George Bank, Australia's fifth-largest retail bank, was focused on a large-scale integration of four separate banks to create the St.George group as it currently exists. As the bank came out of the year 2000, it found that the tightly coupled systems and siloed information platforms developed in this process needed to be integrated to ensure flexibility, tight cost control and speed to market for new applications.

Key to this approach was a layer of messaging middleware between the bank channel front-end systems and its back-end core banking systems. To develop its messaging layer, the bank used IBM WebSphere MQ and IBM WebSphere Message Broker. Its SOA enables the bank to deploy new products with improved time to market, while reducing disruptions to operations.

"The bank once again enjoys high customer satisfaction levels — 75.3 percent, according to recent surveys — due to a consistent and personalized customer experience. "We attribute much of the benefit achieved to the shared use of services across our various channels and the layer of messaging middleware from IBM," said Greg Booker, Head of Group Architecture, St.George Bank.

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