



Progress
OpenEdge

SonicMQ®

Messaging-based Integration for the OpenEdge Enterprise

In today's global enterprise, OpenEdge® applications need to share information with a wide array of multi-vendor applications and databases running on a range of platforms. A standards-based messaging system provides an ideal way of connecting disparate applications while providing built-in security, scalability and reliability through asynchronous, guaranteed message delivery.

HIGHLIGHTS

Standards Based

High Performance

Publish / Subscribe & Point-to-Point Messaging

Guaranteed Message Delivery

Load Balancing & Clustering

Continuous Availability

Management Framework

Wide Area Deployability

Comprehensive Out-of-the-Box Security

Progress® SonicMQ is the industry's most robust and resilient standards-based enterprise messaging system, delivering unmatched service availability, high performance, exceptional management capabilities and unsurpassed scalability for any size deployment. SonicMQ ensures system uptime through the patent-pending Sonic Continuous Availability Architecture™, and flexibly scales through Dynamic Routing Architecture® (DRA) and advanced clustering technologies. SonicMQ's advanced distributed management and deployment infrastructure dramatically simplifies operations and lowers the total cost of ownership for business-critical communication across the enterprise. Superior authentication, authorization, and encryption support ensures that messages and systems are protected inside and outside the firewall.

Robust Enterprise Messaging System

Industry leading companies building OpenEdge applications rely on SonicMQ for mission-critical communications within the enterprise and for connecting remote business partners and customers. Out of the box, SonicMQ is a complete, mature messaging system that includes many features missing in competitive offerings. Its guaranteed message delivery system ensures messages are NEVER lost due to any type of software, hardware or network failure.

– Why Messaging?

Applications and components in a distributed application need to communicate with each other as they interoperate to carry out business activities. Coding direct connections for these communication pathways is inflexible when the system changes and has limited scalability as the system grows. Middleware to carry out messaging addresses these issues. Messaging provides a reliable transportation mechanism that is platform- and language-independent, allowing message senders and receivers to be loosely coupled. Senders communicate with a message broker, who in turn is responsible for delivering the message to one or many receivers as appropriate. An added benefit is that the message sender and receiver do not have to be connected and running at the same time: messages can be queued and delivered when a connection is established.

PROGRESS
SOFTWARE

SonicMQ supports two messaging approaches: Many-to-One model, or point-to-point, in which the client application (sender) sends messages that are received by only one application (receiver); and a Many-to-Many model, or publish & subscribe, in which an application (publisher) broadcasts messages that are received by many applications (subscribers).

– **Unsurpassed Scalability & Performance**

SonicMQ handles a large number of connections with high-speed, reliable message throughput, providing an extremely performant and scalable, standards-based enterprise messaging system. Each broker supports thousands of persistent messages per second with minimal latency and can handle a vast number of connections and destinations. SonicMQ has proven performance for demanding environments including financial services trading applications, enterprise resource planning and manufacturing systems, and retail store communications.

Extensive Standards-Based Connectivity

SonicMQ provides a standards-based approach for integrating OpenEdge applications with a range of vendor applications and legacy systems without the need to modify existing ABL (4GL) code.

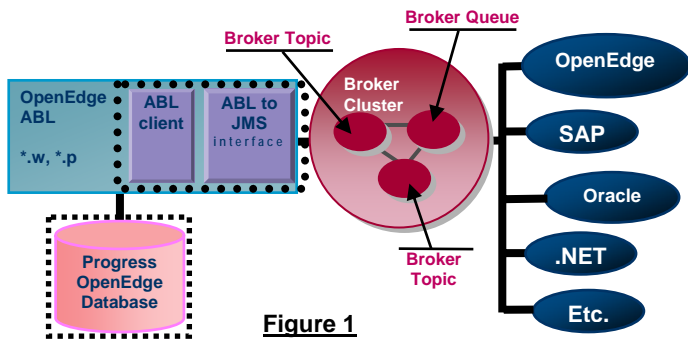


Figure 1

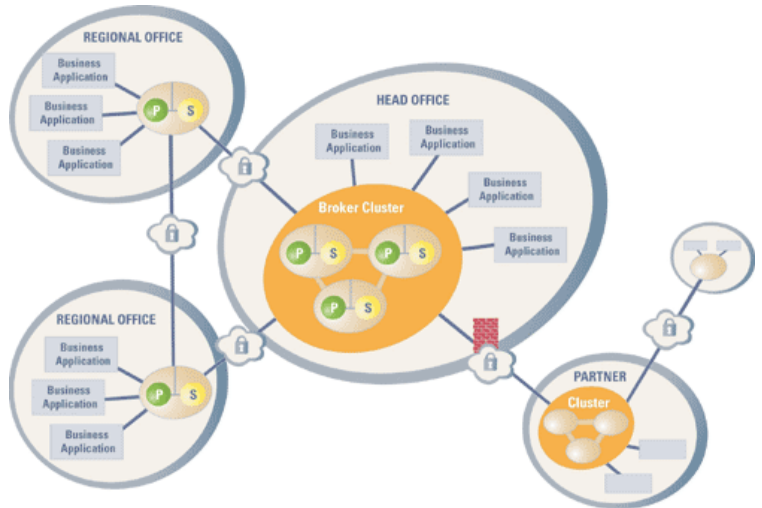
OpenEdge provides the underlying interface between the Progress ABL and the standards-based Java Message Service (JMS) implementation of SonicMQ (Figure 1). Adherence to standards promotes reusability of existing assets, simplifies integration with other platforms and applications, and minimizes development time and costs. With JMS 1.1 compliance and J2EE 1.4 compatibility, organizations can fully leverage their existing resources. Accordingly, SonicMQ provides the capability of seamlessly integrating OpenEdge applications with J2EE application server-based solutions such as BEA WebLogic

and IBM WebSphere, greatly expanding connectivity within a heterogeneous enterprise.

SonicMQ is also one of a few messaging products to support the direct integration of HTTP applications into the messaging backbone. This facilitates the easy integration of existing Internet applications and wireless devices, which depend on the firewall-friendly HTTP and require a small client footprint. In addition, SonicMQ comes out of the box with SOAP protocol handlers, allowing SonicMQ to expose itself as a Web service or to call out to other Web services. Additionally, support is provided for the Web services protocols WS-Reliable Messaging, WS-Security and WS-Policy.

– **Advanced Clustering Technology**

When the throughput capacity of a single message broker is reached, SonicMQ brokers can be grouped into clusters, which act as a single virtual broker. Brokers are transparently added to the cluster, without requiring development or administration changes to the enterprise messaging system. Clusters can be linked with other clusters via Sonics Dynamic Routing Architecture to form a community of clusters that can scale to support large numbers of messages, users and applications across the extended enterprise.



– **Dynamic Routing Architecture (DRA)**

SonicMQ's Dynamic Routing Architecture (DRA) technology allows the delivery of messages between applications regardless of the cluster that the application is connected to. DRA facilitates expansion without incurring significant administrative overhead. Clusters may connect to other clusters as needed, creating highly-distributed deployments across loosely-coupled locations.

Continuous Availability

SonicMQ raises the bar for high availability and fault-tolerant messaging, reducing operational risk and decreasing the development time and administration complexity in creating high-availability solutions. When minutes of downtime translate into millions in lost revenue, missed opportunities or regulatory fines, it is clear that a better solution is required. The patent-pending Sonic Continuous Availability Architecture (CAA) addresses these issues, so your business applications continue to operate in the event of system failure. CAA provides high availability for the messaging layer, including the Sonic message brokers, Sonic clients and the communications between clients, brokers, and destinations. In-process transactions, no matter how complex, continue to their destinations without any costly roll-back or recovery time.

– Continuously Available Brokers and Clients

Real-time replication of data is provided between the primary and secondary brokers over dedicated networks, reducing the need for additional expensive hardware or operating system fault tolerance solutions in the messaging layer. In the event that the primary broker becomes unavailable, the secondary broker detects the failure, and immediately accepts client connections, without transactional rollback.

Clients are provided with alternative network paths and secondary broker information upfront should there be a network or primary broker failure. Upon failure, the client seamlessly resumes the connected session that was in progress. Applications can continue to operate without the risk of lost, duplicate, trapped, or out-of-order messages – without the development of complicated error handling solutions or an operations staff on hand to handle these situations.

Management services can also be replicated to multiple locations, reducing setup and administration costs.

– Flexible Continuous Availability Solutions

To provide continuous availability in large scale and diverse deployments, SonicMQ can be configured across heterogeneous hardware platforms. It is not a requirement to have identical hardware for primary and secondary servers. Additionally, a machine with a secondary broker can be configured with another primary broker, increasing the utilization of typically idle machines as well as the

performance and load balancing of the cluster. Broker failure and subsequent reactivation is transparent to the cluster, eliminating the need to develop elaborate availability solutions.

Comprehensive Out Of The Box Security

SonicMQ's comprehensive authentication and authorization, together with superior encryption support, ensures that messages and enterprise system access is appropriately restricted, inside and outside the firewall.

SonicMQ is unique in that it comes with its own payload encryption functionality built into the product. This feature allows business applications to enjoy the benefits of secure communications without incurring the performance impact of full SSL channel encryption. Out of the box, SonicMQ includes a variety of selectable cipher suites including DES, with the option of 128, 168, and 256-bit encryption. This allows applications within the enterprise to balance their security needs with desired performance metrics. For advanced security, SonicMQ embeds the leading security product for SSL encryption, RSA's B-Safe product, which provides up to 256-bit encryption and has been certified to be FIPS-140 compliant. Authentication and authorization support includes:

- Ability to plug in third party authentication products for easy integration with existing security infrastructures
- Certificate-based mutual authentication for client-broker and broker-broker SSL connections using PKCS standards
- Support of standards based, single sign-on authentication products

Support for Internet protocols HTTP, HTTPS, SSL and TCP/IP increases the reach of your messaging infrastructure across the firewall, providing end-to-end security across your extended enterprise. Support is also provided for forward and reverse proxy servers, enabling one or more brokers to reside within the DMZ.

Management Framework

As corporate networks grow and IT resources continue to be scarce, shrinking staffs must learn to manage larger and larger networks. To save costs, IT system managers increasingly require that systems within their networks can be effectively managed from a centralized location. SonicMQ's Java Management Extensions (JMX)-based infrastructure provides a centralized, standards-based approach for managing and monitoring SonicMQ deployments whenever and wherever management and monitoring are needed. This centralized approach streamlines the management of the entire messaging backbone, which in turn lowers the overall costs associated with supporting the entire enterprise infrastructure. In addition, SonicMQ's dynamic monitoring capabilities facilitate real-time activity monitoring and reporting without interfering with the functioning and speed of the messaging middleware.

– Management Console

SonicMQ's management console enables easy configuration, deployment and management of complex multi-broker architectures from a single location. Messaging configuration changes are pushed in real-time to brokers that can dynamically reconfigure themselves, resulting in improved system efficiency and decreased management costs. The console facilitates proactive monitoring of the messaging backbone by enabling the configuration, viewing and management of instrumentation points and alerts. This provides system administrators advanced warning of problems before they cause major system downtime.

The Foundation of the Sonic Family of Products

The messaging capabilities of SonicMQ can be optionally enhanced to include applications written in a variety of programming languages along with integration with technologies such as WebSphere MQ, TIBCO Rendezvous, FTP, non-SonicMQ JMS and Mail.

You can further enhance OpenEdge integrations with the Sonic ESB product family. Built on the foundation of SonicMQ, Sonic enterprise service bus (ESB) simplifies the integration and flexible reuse of business components using a standards-based service-oriented architecture (SOA). Additional capabilities are made available in Sonic Workbench™, Sonic Orchestration Server™, Sonic XML Server™, and Sonic Database Service™.

For additional information on SonicMQ and the OpenEdge platform support, please contact your local Progress Software sales representative or visit www.progress.com.

Worldwide and North American Headquarters

Progress Software Corporation, 14 Oak Park, Bedford, MA 01730 USA Tel: 781 280 4000 Fax: 781 280 4095

Europe/Middle East/Africa Headquarters

Progress Software Europe B.V. Schorpioenstraat 67 3067 GG Rotterdam, The Netherlands Tel: 31 10 286 5700 Fax: 31 10 286 5777

Latin American Headquarters

Progress Software Corporation, 2255 Glades Road, One Boca Place, Suite 300 E, Boca Raton, FL 33431 USA Tel: 561 998 2244 Fax: 561 998 1573

Asia/Pacific Headquarters

Progress Software Pty. Ltd., 1911 Malvern Road, Malvern East, 3145, Australia Tel: 61 39 885 0544 Fax: 61 39 885 9473

Progress and OpenEdge are trademarks or registered trademarks of Progress Software Corporation in the U.S. and other countries. Sonic Collaboration Server, Sonic ESB, Sonic SOA Suite, Sonic Orchestration Server, and Sonic XML Server are trademarks or registered trademarks of Sonic Software Corporation in the U.S. and other countries. Any other trademarks or service marks contained herein may be the property of their respective owners.

**PROGRESS
SOFTWARE**

www.progress.com

Specifications subject to change without notice.
© 2006 Progress Software Corporation.
All rights reserved.