# PROGRESS SONICMQ

## ENTERPRISE-GRADE MESSAGING

Progress® SonicMQ® delivers a unique combination of high performance, guaranteed message delivery under all conditions, and continuous availability—providing a foundation for operational responsiveness across the enterprise. SonicMQ ensures system uptime through the patent-pending Sonic Continuous Availability Architecture and flexibly scales through the Dynamic Routing Architecture® (DRA) and advanced clustering technologies. The SonicMQ 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 rely on SonicMQ for mission-critical communications within the enterprise and for connecting remote business partners and customers. Additionally, many ISVs and equipment manufacturers embed SonicMQ as the messaging component of their best-of-breed applications. Out of the box, SonicMQ is a complete, mature messaging system that includes many features that are missing in competitive offerings, saving you time and money when developing your own add-on solutions. With a

### *HIGHLIGHTS*

- *Standards-based*
- *High performance*
- *Publish/subscribe and point-to-point messaging*
- *Guaranteed message delivery*
- *Load balancing and clustering*
- *Continuous availability with zero downtime*
- *Management framework*
- *Centralized installation, upgrades, patches, and management*
- *Wide-area deployability*
- *Comprehensive, out-of-the-box security*
- *Easy to embed*

guaranteed message delivery system that ensures messages are NEVER lost due to any type of software, hardware or network failure, you can depend on SonicMQ for your most complex business transactions.

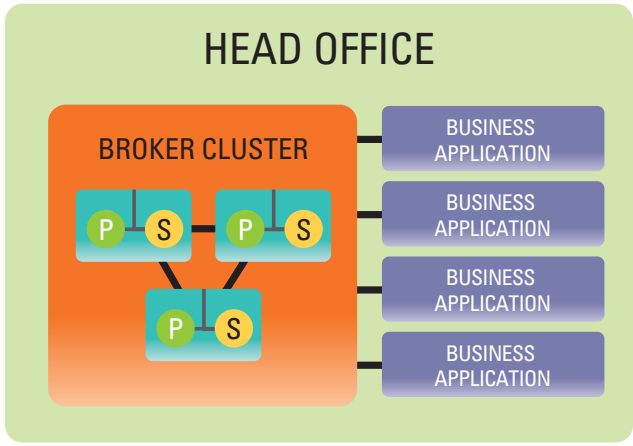


***Figure 1***

*This diagram illustrates the SonicMQ clustering and Continuous Availability capabilities. The primary broker (P) provides real-time replication of messages to the secondary broker (S) so failover occurs in seconds without recovery or transaction rollback. Communities of brokers create a virtual cluster to handle increased demand from users and applications.*

### *Unsurpassed Scalability and 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, telecommunications service provisioning and retail store communications.

### *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 the Sonic 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. These clusters are typically used to link clusters in different organizations, and clusters usually reside in different network domains.

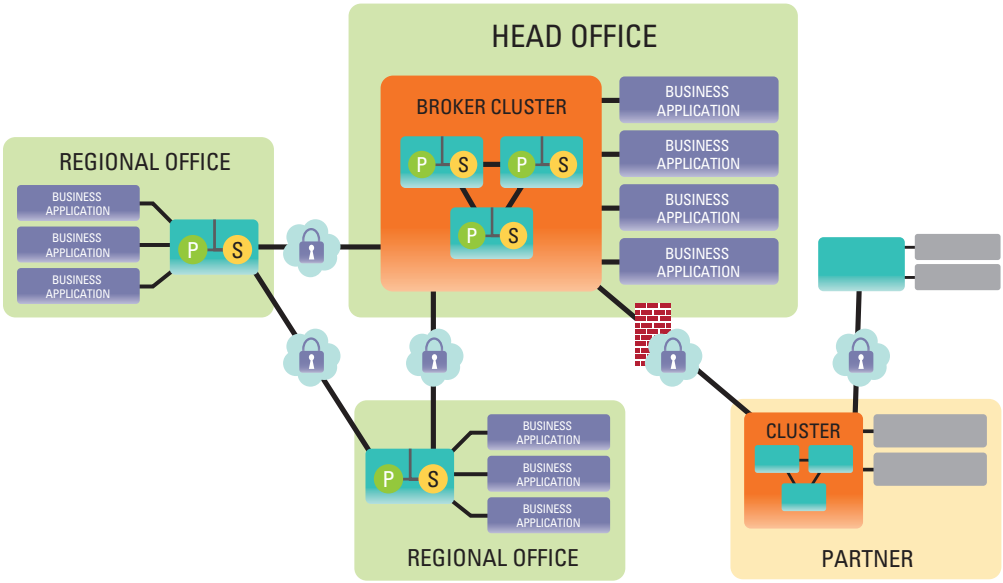


***Figure 2***

*This diagram illustrates the highly available, secure and reliable extension of the messaging backbone to remote offices and business partners. Communications are transparently routed and load balanced across the brokers in the clusters, facilitating the fastest possible communication across the most effective path.*

### *Dynamic Routing Architecture (DRA)*

The SonicMQ Dynamic Routing Architecture technology allows the delivery of messages between applications regardless of the cluster that the application is connected to. DRA also enables the routing of messages around blocked connections. In case of a connection failure, (e.g., between regional offices), DRA routes messages via alternative operational paths and 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, enabling 24x7 operational responsiveness with zero downtime, and decreasing the development time and administration complexity in creating high-availability solutions. Oftentimes, companies build elaborate mechanisms to address the problems caused by systems failure, specifically, trapped messages on the failed server, duplicate messages sent and received, and out-of-order messages. 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 rollback or recovery time.

### *Continuously Available Brokers and Clients for Zero Downtime*

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-tolerant 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 up front 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.

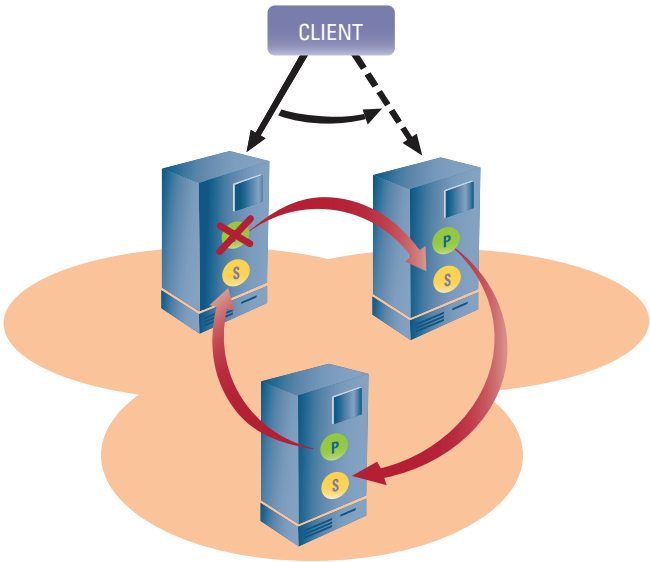


***Figure 3***

*More efficient resource utilization and higher cluster performance are achieved by distributing broker pairs across machines.*

With the CAA, your systems are also up and running during maintenance. There's no need to bring clusters down for installations, upgrades, updates, and patches. This work can be performed on brokers in CAA pairs one at a time—for 100% system uptime—and from a central location for faster system service and lower IT costs. Management services can also be replicated to multiple locations, reducing set-up and administration costs.

### *High Performance and Low Latency*

Sonic CAA supports both non-persistent and persistent messaging modes. By combining the performance of non-persistent messaging with the reliability and availability of Sonic CAA, you can achieve unparalleled message throughput with extremely low latency.

### *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 are transparent to the cluster, eliminating the need to develop elaborate availability solutions.

## COMPREHENSIVE, OUT-OF-THE-BOX SECURITY

The comprehensive authentication and authorization of SonicMQ, together with its superior encryption support, ensure that messages and enterprise system access are 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. Sonic provides support for fine-grained management security as well,

ensuring that only authorized roles have access to only those components for which they are authorized. In addition, with Sonic, you can also leverage your existing network investments with:

- The 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.

## EXTENSIVE STANDARDS-BASED CONNECTIVITY

SonicMQ provides a standards-based approach for integrating applications and components across the extended enterprise. Standards adherence promotes reusability of existing assets; simplifies integration with other tools, platforms, and applications; minimizes development time and costs; and improves software quality. With JMS 1.1 compliance and J2EE 1.4 compatibility, organizations can fully leverage their existing resources. SonicMQ fully complements and seamlessly integrates with industry-leading J2EE application servers such as Oracle WebLogic (formerly BEA WebLogic) and IBM WebSphere, expanding the reliability and application connectivity of your 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, which allow 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

### APPLICATION SERVER SUPPORT

*Enhance your application server with best-of-breed messaging.*

- *BEA WebLogic Server*
- *IBM WebSphere*
- *JBOSS*
- *Apache Tomcat*

## 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. The SonicMQ Java Management Extensions (JMX)-based infrastructure provides a centralized, standards-based approach for deploying, managing and monitoring SonicMQ deployments whenever and wherever management and monitoring are needed. And now SonicMQ extends its centralized approach to installation, updates, and patches as well. This centralized approach streamlines the deployment, scaling and management of the entire messaging backbone, which in turn lowers the overall costs associated with supporting the entire enterprise infrastructure. In addition, the SonicMQ dynamic monitoring capabilities facilitate real-time activity monitoring and reporting without interfering with the functioning and speed of the messaging middleware—again helping to ensure operational responsiveness

### *Management Console*

The SonicMQ 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

### *SONIC MQ BRIDGE AND CLIENTS*

*Connect and extend your existing assets.*

- *SonicMQ Bridge for JMS CAA Edition*
- *SonicMQ Bridge for IBM WebSphereMQ CAA Edition*
- *SonicMQ Bridge for TIBCO Rendezvous CAA Edition*
- *SonicMQ Bridge for FTP CAA Edition*
- *SonicMQ Bridge for eMail CAA Edition*
- *SonicMQ C/C++/COM Client*
- *SonicMQ C# Client*

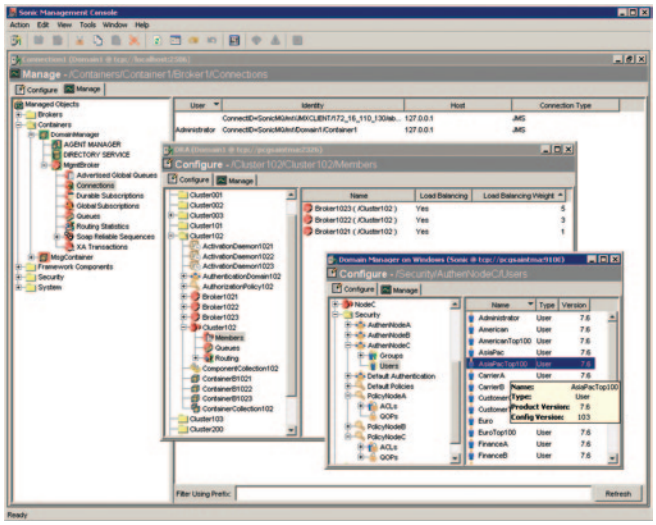

***Figure 4***

*The Sonic Management Console provides a window into your enterprise messaging system, and allows you to manage your environment from a single location.*

configuration, viewing and management of instrumentation points and alerts. This provides system administrators advanced warning of problems before they cause major system downtime.

SonicMQ also provides centralized initial installation of containers on a host as well as centralized installation of service packs, updates, patches, and upgrades to major release. This eliminates the need for local IT resources, reducing IT costs and time-to-market for scaling or updating functionality. With Sonic, you can more quickly respond to new opportunities, aligning IT resources with new business and market needs—without compromising reliability.

### *Management Environment*

The SonicMQ management environment enables detailed, real-time monitoring and dynamic resource loading, decreasing the time required to diagnose and respond to problems and minimizing system downtime. In addition, the broker's ability to locally cache configuration information eliminates dependencies on a centralized configuration server, easing system management and increasing availability.

## *SYSTEM REQUIREMENTS*

*Platforms Supported:*

*Microsoft Windows*

*Sun Solaris*

*Red Hat Linux*

*IBM AIX*

*HP-UX*

## PROGRESS SOFTWARE

Progress Software Corporation (NASDAQ: PRGS) is a global software company that enables enterprises to be operationally responsive to changing conditions and customer interactions as they occur. Our goal is to enable our customers to capitalize on new opportunities, drive greater efficiencies, and reduce risk. Progress offers a comprehensive portfolio of best-in-class infrastructure software spanning event-driven visibility and real-time response, open integration, data access and integration, and application development and management—all supporting on-premises and SaaS/cloud deployments. Progress maximizes the benefits of operational responsiveness while minimizing IT complexity and total cost of ownership.

## WORLDWIDE HEADQUARTERS

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