Supercharge Your Diffusion Messaging Broker with Zing

Improve the responsiveness and throughput of the Diffusion™ Java message broker and data distribution engine

Java-Based Messaging System Leverages Zing for Real-time Performance

Diffusion, from Push Technology, is a high performance Java message broker and data distribution engine with support for multiple protocols and native client connectivity for a wide range of platforms. But unlike generic messaging systems, Diffusion is designed to support client ubiquity and intelligent data management that is easy to scale at very low-costs.

As the need for high performance mobile solutions grows, so do the requirements for transaction and data integrity over the Internet. But real-time data access and high speed message routing requires a low latency, highly consistent message broker that can intelligently manage data to any mobile device. But application consistency is only as good as the underlying Java runtime or JVM.

Zing® is compliant with the Java SE specification and based on Oracle's HotSpot. Designed for enterprise applications and workloads that demand higher transaction rates, greater response constancy with higher sustained throughput, Zing is the only JVM that can elastically scale in memory and CPU cores and still guarantee response time consistency.

By deploying on Zing, the Diffusion Java broker can leverage best-in-class Java runtime technology that can dramatically increase messaging throughout, improve average latency and eliminate delivery time outliers associated with stop-the-world garbage collection pauses. Using Diffusion and Zing together, enterprises can deploy an end-to-end solution for delivering real-time data services to the "edge" for Internet and mobile clients at a fraction of the cost of proprietary hardware solutions.

Smart Data Distribution

You can now achieve unparalleled performance and effortless scalability in delivering real-time data between cloud, web browser, desktop and mobile devices. Designed from the ground up for two-way real-time messaging, this next-generation push-based communications platform enables organizations to deliver personalized and real-time experience regardless of content type, geography or network. Diffusion has been developed to handle all aspect of the data journey, from efficiently streaming volatile data, to conserving bandwidth, to increasing application performance and delivering near-zero latency – all with minimal overhead across client networks.

BENEFITS OF SUPERCHARGING DIFFUSION USING ZING

- Provides lower latency, highly consistent delivery
- Reduces time-to-deployment and JVM tuning needs
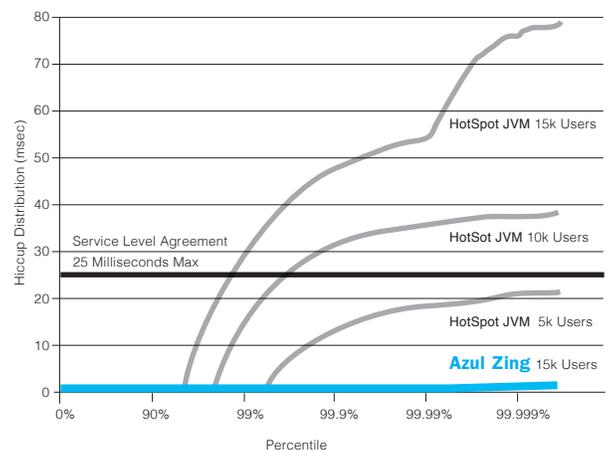- Lowers back-end costs through use of cost-efficient x86 hardware

Solution: High Performance JVM for Messaging

Diffusion provides a one stop, end-to-end solution for delivering real-time data services to the "edge" for Internet and mobile clients. Diffusion can power low cost bi-directional communication with global audiences, without the need for complex, expensive propriety architectures. Zing enhances Diffusion's ability to scale linearly and provide consistent message delivery using commodity hardware.

Performance Benchmark

Push Technology conducted a benchmarking study in Spring/Summer 2013 to compare the performance of running on Azul Systems Zing versus Oracle's HotSpot™ JVM. The results are shown to the right - Zing delivered consistent performance with no pauses to delay business logic. In contrast, HotSpot exhibited delays of up to 48 milliseconds at the 99.9th percentile.

In interactive environments, pauses of 40 milliseconds or more are noticeable, delays of 100 milliseconds are frustrating to users, and more than 100 milliseconds is unacceptable.

Pause comparison of Zing vs. Oracle's HotSpot.
Graph data courtesy of Push Technology

Try It Today

To arrange a test drive of Push Technology's Diffusion messaging solution leveraging Zing high performance Java technology, contact us:

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