

ACCELERATE RED HAT JBOSS DATA GRID WITH AZUL ZING

PARTNER SOLUTION BRIEF

BENEFITS OF AZUL ZING WITH RED HAT JBOSS DATA GRID

Increase throughput and simplify deployment

Perfect for real-time apps and big data, Zing supports larger in-memory nodes (up to 2TB) and still meets strict latency service-level agreements (SLAs).

Improve response time consistency and availability

Ideal for latency-sensitive or user-interactive apps, Zing eliminates response time outliers, lowers max response time to 10s of milliseconds and reduces grid timeouts.

Simplify deployment configurations

By supporting very large nodes, Zing reduces the number of nodes needed in the cluster, which simplifies deployment and management.

Accelerate time to market

Ideal for apps with high change velocity or frequent new feature launches, Zing allows for less app tuning and increases developer productivity.

DEVELOP AND DELIVER A HIGHLY SCALABLE JAVA-BASED DATA TIER

With ever-rising business and user expectations, pressure to innovate and deliver has never been greater. Development and DevOps organizations must use new technologies and higher volumes of in-memory data to deliver insight, capability, and value faster than ever, and customers have no tolerance for inconsistent delivery and uneven performance.

While new in-memory computing (IMC) techniques hold the promise of better scalability and performance, ensuring consistent, low-latency performance is not a guarantee. Careful attention to product choices and deployment topologies is essential to maximizing the values of these new IMC solutions, including in-memory data grids (IMDGs).

MAXIMIZING IN-MEMORY DATA GRIDS

Red Hat® JBoss® Data Grid provides an excellent middle tier to ensure real-time access to the vast amount of newly available data. JBoss Data Grid supports existing database systems and infrastructures, which store petabytes of data such as datasets commonly used for NoSQL, Apache Hadoop, and similar technologies. But unlike traditional databases, which are notoriously difficult and expensive to scale and may not be well suited for diverse data types, JBoss Data Grid has the core functionality, resilience, and redundancy required to:

1. Serve as a highly scaleable data tier.
2. Support big data and fast, data-centric applications.
3. Serve as a high-density, high-performance primary datastore.

As a result, organizations can fully reap the benefits of access to large, scalable, and performant datasets while still maintaining pauseless operational performance at in-memory speeds.

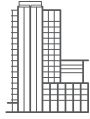
JBoss Data Grid can be used to incrementally extend the performance and scalability of established applications and implement new, real-time business applications that require high performance and scale. This benefit is only possible with in-memory computing techniques based on the idea of using memory for fast access, distributing data for scale, and maintaining replicated nodes for resilience and persistence.

FEATURES AND CAPABILITIES

RED HAT JBOSS DATA GRID

JBoss Data Grid is a distributed in-memory grid based on the Infinispan open source project. Because JBoss Data Grid provides an easy way to scale your data tier without expensive rewrites, enterprises now have a flexible and cost-effective way to improve application performance and get more value out of their business-critical applications.

JBoss Data Grid is an ideal fit for any application that has heavy data density or requires integration with other transactional services, such as message queues, to ensure reliability and consistency. Popular industries that benefit today from JBoss Data Grid include online retail, financial services, telecommunications, transportation and logistics, Software-as-a-Service (SaaS), and big, fast or streaming data.



ABOUT RED HAT

Red Hat is the world's leading provider of open source software solutions, using a community-powered approach to provide reliable and high-performing cloud, Linux, middleware, storage, and virtualization technologies. Red Hat also offers award-winning support, training, and consulting services. As a connective hub in a global network of enterprises, partners, and open source communities, Red Hat helps create relevant, innovative technologies that liberate resources for growth and prepare customers for the future of IT.

NORTH AMERICA
1 888 REDHAT1

**EUROPE, MIDDLE EAST,
AND AFRICA**
00800 7334 2835
europe@redhat.com

ASIA PACIFIC
+65 6490 4200
apac@redhat.com

LATIN AMERICA
+54 11 4329 7300
info-latam@redhat.com



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AZUL ZING, THE JBOSS DATA GRID ACCELERATOR

Zing is an innovative, pauseless Java™ Virtual Machine (JVM) with improved metrics when compared to legacy Java runtimes.¹ Zing is fully compatible with OpenJDK or Oracle's HotSpot JVM. When deployed with JBoss Data Grid, Zing solves Java's garbage collection and performance issues and provides highly consistent runtime metrics for any memory size grid node (20GB to 2TB). In a recent benchmark, Zing reduced peak response times for JBoss Data Grid deployments by 250 times and showed superior consistency, as shown in Figure 1.²

Designed for Java workloads, Zing is ideal for applications spanning a wide variety of industries and use cases, including online retail, financial services, telecommunications, transportation and logistics, media, SaaS, and other business-critical systems where scalable, in-memory datasets and predictable response times are essential.

AZUL ZING AND RED HAT JBOSS DATA GRID

Together, Zing and JBoss Data Grid offer the benefits of scale, performance, and response time consistency – without the costs of rewriting or replacing your data tier. As a fully compliant Java runtime, Zing supports your existing applications and scales your JBoss Data Grid tier to meet the most demanding response time requirements and service-level agreements (SLAs). Plus, Zing is available as a zero-cost upgrade option for all JBoss Data Grid customers with current support agreements.

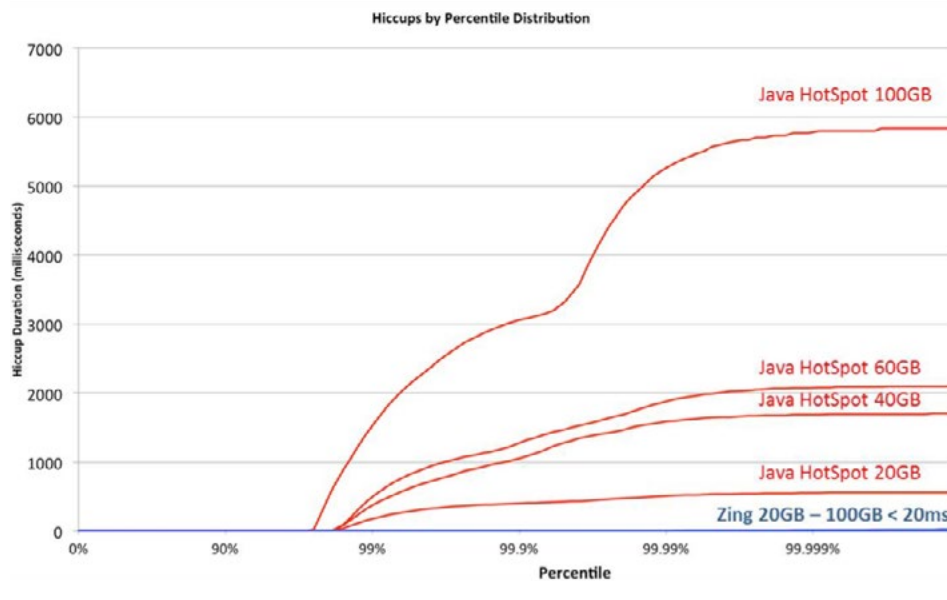


Figure 1. JBoss Data Grid on Zing has more consistent performance at all node sizes

LEARN MORE

For more information on Azul Systems, email info@azul.com, call +1.650.230.6500, or visit www.azul.com/jboss-data-grid.

For more information on Red Hat JBoss Data Grid, visit redhat.com/en/technologies/jboss-middleware/data-grid.

1 JVM performance study comparing Java HotSpot and Azul Zing using Apache Cassandra, April, 2015. https://www.azul.com/files/JVM_Performance_Brief_Cassandra_v3.pdf
2 JVM performance study comparing Java HotSpot to Azul Zing using Red Hat JBoss Data Grid, February, 2014. https://www.azul.com/files/Azul_Performance_Brief_JBoss_Data_Grid_v4.pdf