# Supercharging Red Hat® JBoss® Enterprise Application Platform with the Azul Zing® Java Runtime

Essential technology for enterprise-class performance and scalability when runtime consistency and throughput are critical

## Application Runtime Consistency is the Key to Business Success

Enterprises rely on Java-based applications to manage customer relationships, capture revenue and drive internal processes. Whether these applications require response times in the seconds or milliseconds the inability to meet business goals or service level agreements (SLAs) for latency and consistency means lost revenue.

This undesirable latency and response time inconsistency can have many causes, including slow network access, over-loaded hardware and even issues caused by the underlying Java infrastructure. Unfortunately, Java is an interpreted language designed for maximum portability and dynamic capabilities which aid developer productivity, but doesn't ensure low latency and consistent performance.

Today's applications must operate on multiple platforms (e.g. Cloud and bare-metal) in heterogeneous, distributed networks and provide robust, consistent performance across a range of application requirements. Large in-memory cach-ing, high object allocation rates and increasing transaction loads are now common configurations and can lead to long application pauses as the Java infrastructure performs memory management.

### The Business Imperative

Yet as business demands more from these Java applica-tions – more users, transactions and information – the more vulnerable these business critical applications become, leading to inconsistent latency, long pauses and missed opportunities. These performance issues are particularly acute in capital markets, SaaS, self-service portals, online retail/eCommerce and for Big Data/analytics applications – anywhere companies need to deliver consistently fast response times and high throughput to meet the demands of the business.

### Achieving Consistent High Throughput and Low Latency

In order to provide enterprise-class performance and scalability for customer-centric or transactional systems, companies must address multiple issues that drive unac-ceptable performance. The ideal solution not only eliminates the pauses caused by the Java runtime (i.e. Java Virtual Machine), but also leverages modular, light-weight Java frameworks that were built with the Cloud in mind. To ensure consistent, end-to-end performance, companies must carefully consider each component in the runtime stack and confirm that they are optimized to work together.

## WHY ZING FOR JBOSS APPS?

- Unparalleled application scalability and sustained throughput
- A better user experience – rich features and fast response times
- Unmatched low latency for both machine-level (microsecond) and user-interactive (sub-second level) systems
- Speeds time to deployment for new features and applications
- Supports in-memory datasets up to 2 TB with pauseless execution
- Requires no application changes or rearchitecting
- Improved production-time visibility and faster problem resolution

# Zing is Essential Java Technology

Azul Zing is the best way to run data-intensive, high performance or latency-sensitive JBoss EAP applications. Zing allows your apps to scale far beyond current limits while reducing average and max response times.

## Red Hat JBoss Enterprise Application Platform (EAP)

Based on the first Java EE server embedded in a Platform-as-a-Service (PaaS), JBoss Enterprise Application Platform was created by Red Hat with the Cloud in mind. Based on a services-driven set of components, JBoss EAP simplifies how applications are deployed into different environments. With EAP your enterprise can programmatically manage applications, automate these processes as you build, or integrate with your own management tools. And work seamlessly in your private Cloud. It also provides domain management, which helps administrators manage multiple servers as one and support rolling deployments within the domain. EAP has also been optimized to work with both multicore and virtualized environments. This helps Red Hat provide an extremely low memory footprint and blazingly fast startup times.

## Azul Zing

Zing is an innovative, high performance JVM that eliminates application jitter, response time outliers and in-memory data limitations. Designed for low latency and large scale use cases, Zing is the new Java performance standard for in–memory computing, eCommerce, financial trading, Big Data and HPC applications. As a fully compliant Java SE JDK, Zing can support any new or existing Java applications without any code changes. Zing is optimized to work great right out-of-the-box with all JBoss products, so companies gain

improved latency and better sustained throughput immediately by installing these products on the same servers.

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## Gain competitive advantage

To compete, you need to innovate rapidly. Azul Zing lets you focus on the delivery of new business capabilities instead of production performance issues. You can dramatically speed time to market, scaling your systems and launching new features or applications without time-consuming tuning cycles. Zing also allows you to deliver rich features or new business models not practical with your current infrastructure.

## Get Started Today

Azul Zing is the best way to run JBoss EAP applications. Only Zing delivers unstoppable performance, faster time-to-market and helps you get the most out of your existing investments. Zing requires no application changes, and you can try it free.

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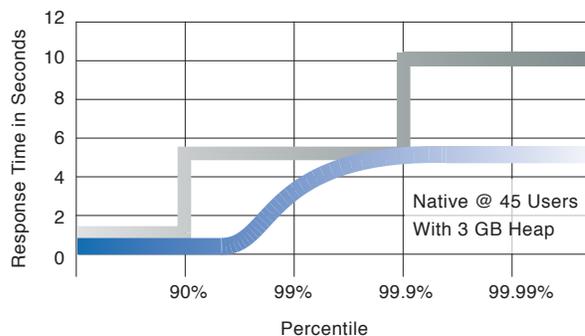azul.com

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Figure 1  Existing Java Infrastructures Hit Scalability Limits

Figure 2  JBoss EAP and Azul Runtime