



# The Power of Java Unleashed for Capital Markets

Zing is the unmatched JVM from Azul Systems that provides certainty of execution, guarantees throughput and ensures predictable behavior in trading and data-intensive capital markets applications.

## Unmatched Java Performance for Capital Markets

Global capital markets have long been home to the world's most advanced Real-Time trading systems and big data platforms, a proving ground for the most advanced technologies. Today, firms demand trading systems capable of handling massive volumes of pricing data with microsecond-level response times. This data is critical for complex algorithms designed to analyze, back-test and execute trading strategies across multiple asset classes on a 24x7 basis, in banks, in systematic hedge funds and in trade execution, market-making and exchange environments. In middle offices, regulatory compliance, capital allocation and risk management have intensive data management and automated reporting requirements, while asset managers increasingly deploy multi-factor analytics over extensive portfolio universes. Whatever your role in the capital markets – buy-side, sell-side, intermediary and even regulator - advanced technology capable of delivering ultra-low latency high performance, predictability, flexibility, scalability and reliability is a core competitive requirement.

Conventional one-size-fits-all JVMs do not meet the strict performance requirements of today's ultra-competitive global capital markets. The combination of unpredictable, inflexible and inadequate memory management in these JVMs

introduces unacceptable levels of risk into mission-critical systems that are fundamental to profitability and regulator-demanded risk mitigation. The wrong JVM choice can adversely impact a firm's ability to compete and survive.

### Introducing Zing®

The Zing JVM from Azul Systems has established a new performance standard unmatched in the industry. Zing meets or exceeds requirements for both Real-Time and Big Data applications. Zing improves service delivery, removing technical limitations that cause missed business opportunities.

Designed and optimized for today's cost- and performance-driven data centers running Intel x86-64 commodity hardware on Linux, Zing unlocks the power and ubiquity of Java and JVM-based platforms across all stacks and takes it to a new level by leveraging Azul's innovative C4 no-pause garbage collection algorithm. The result is the industry's most advanced JVM that unlocks innovation, eliminating the traditional risks of applications written in Java. Zing also reduces tuning to a single parameter, freeing product development to focus on supporting business innovation and agility rather than on costly and time-consuming attempts to overcome fundamental constraints that inevitably fail to meet expectations.

## BENEFITS OF ZING FOR CAPITAL MARKETS

- **Provide certainty of behavior** Eliminate application pauses, latency spikes and improve start-up time
- **Achieve Ultra-low latency when needed** Increase throughput at far lower average latencies
- **Unlock innovation** Enable new, real-time business capabilities that weren't possible before
- **Enhance Big Data in-memory applications** Provide more complex analytical data in less time
- **Improve time to market** Eliminate the need for most application tuning
- **Better leverage from existing server and cloud resources** Free developers to add capabilities and handle more transactions on existing hardware and software
- **Plug-and-play** Java SE compliant, requiring no code re-compilation or special configuration
- **Allocate resources in real-time** Grow and shrink memory usage above configuration limits, avoid out of memory crashes
- **Unmatched performance and scalability for all data and memory-intensive applications**  
Zing is the proven high performance JVM for capital markets





## Zing is the Best JVM for Capital Markets

Zing is widely deployed throughout the capital markets sector, supporting 100% of the World's top ten trading companies, and predominant among investment banks, leading hedge funds, exchanges and MTFs, cryptocurrency providers, algo traders and prop shops. Zing financial industry use cases range far beyond low-latency Java — Azul also powers Java-based infrastructure based upon Cassandra, Kafka, Hadoop, Spark, Zookeeper, Neo4J and Elastic, and improves performance of key microservices infrastructures including Kubernetes and Docker.

Zing solves the technical limitations associated with standard JVMs, eliminating unproductive performance tuning and scalability-related tasks. With Zing, your development teams can focus on innovation and time-to-market instead of production issues.

Zing's certainty of execution, guaranteed throughput and predictable behavior allow firms to deploy applications with confidence. Zing meets the Java SE standard and is a full-featured JVM that requires no code re-compilation or special configuration. Implicit support for next generation products running on JVM-based languages such as Scala or Clojure guarantees investment protection beyond current applications. Zing also includes a monitoring and management platform that provides complete real-time visibility into the health and performance of mission critical systems running Java.

### Selected Azul Systems Capital Markets Partners



### CUSTOMER SUCCESS

## LMAX Exchange

### Problem:

LMAX needed a way to continue to provide low latency trade execution, high throughput and reliable service while experiencing rapid growth.

### Solution:

Azul Systems Zing

“LMAX Exchange is already one of the fastest execution venues for FX and our deep technological collaboration with Azul will help to ensure we continue to deliver even faster and more consistent execution for our clients in the future.”

*Edward McDaid, CIO at LMAX Exchange*



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## Monotype

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