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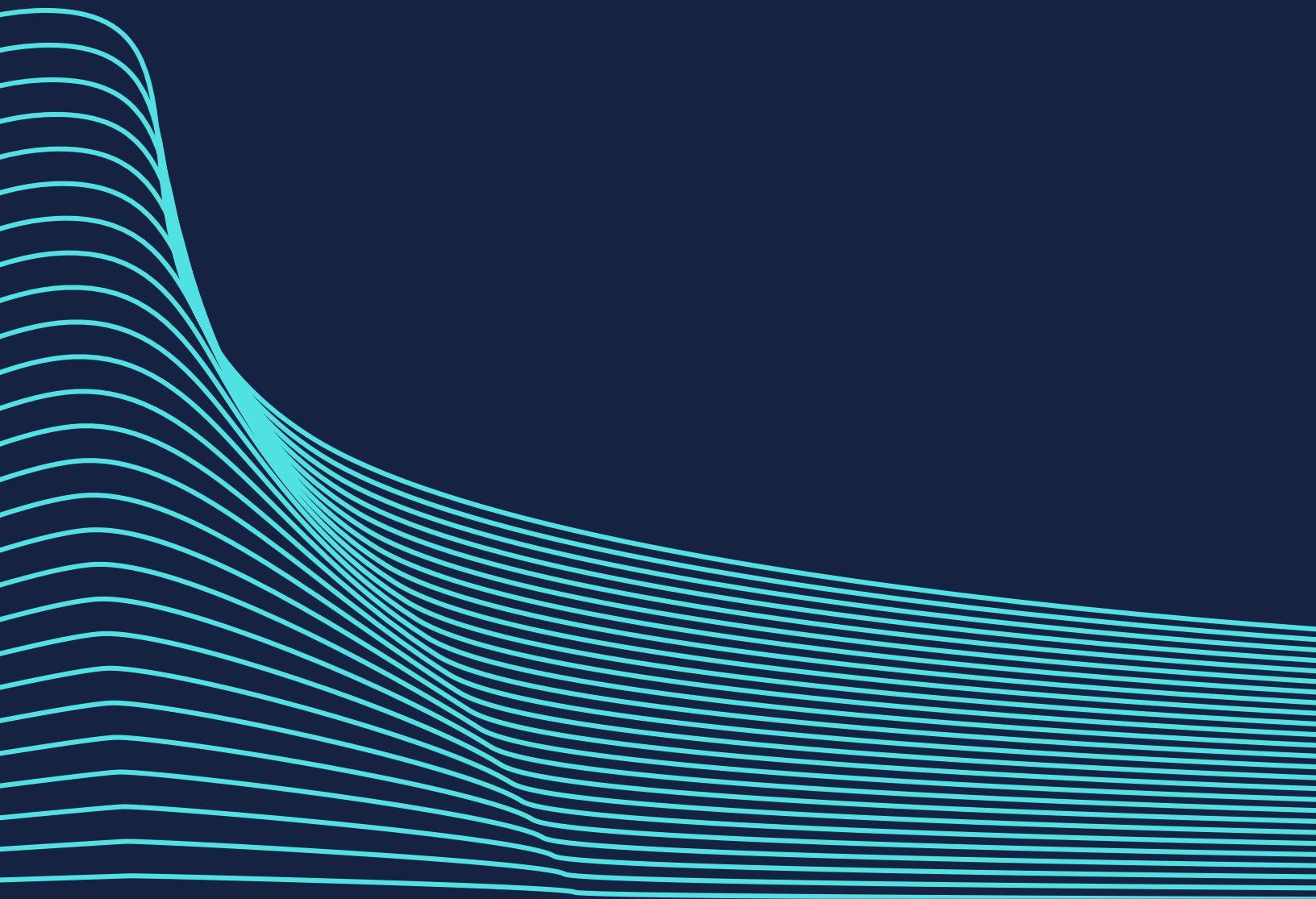
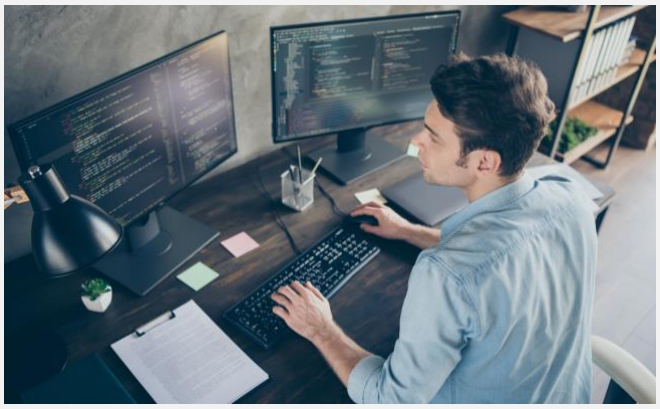
Cassandra runs better with Azul Platform Prime





Improve Cassandra node carrying capacity, eliminate memory bottlenecks, and reduce your Cassandra infrastructure footprint by as much as 50%.

Lower Infrastructure Costs with Azul Platform Prime

Apache Cassandra is a breakthrough technology that is fast, highly scalable and reliable. Cassandra is often deployed with Solr, Lucene, Spark or Elasticsearch to support use cases that require rock-solid datastores with streaming data and/or the need for data indexing and search. All of these technologies are written in Java, the enterprise standard language for ease of development and deployment, or in languages like Scala which utilize the Java Virtual Machine.

Unfortunately, many companies aren't able to realize the full potential of their Cassandra deployment. Applications may not be meeting external or internal SLAs or throughput requirements, or Cassandra may stumble as the dataset or load volumes grow.

The issues aren't due to the application, network or Cassandra – the cause is often the Java Virtual Machine (JVM). Sometimes the JVM needs extensive tuning for acceptable performance, and sometimes even that isn't enough. Most JVMs can hinder scalability and stifle performance. And that's where Azul fills the gap.

Delivering Consistent Performance

Cassandra uses in-memory data storage at each node for fast reads. However, response times can spike if the memory used by the node's JVM starts to fill. Once memory usage reaches a set threshold, the JVM stops processing to clean up old data and free up space, a process called garbage collection (GC). Individual nodes can pause for multiple seconds to complete this process. In production the symptoms are read time degradation and compaction issues, slow nodes that lead to connection time outs or unresponsive applications, and in some cases even cluster failures.

Azul Platform Prime is Optimized for Cassandra

Azul Platform Prime is proven to solve JVM issues for all Cassandra use cases. Azul Platform Prime also improves performance of your entire JVM-centric solution stack, including technologies like Lucene, Solr, Elasticsearch and Kafka.

Azul Platform Prime consistently eliminates Java garbage collection as an issue and reduces peak latencies by up to three orders of magnitude, with minimal tuning. With GC problems out of the way, your system will be able to meet SLAs even under growing loads, and users will be delighted by the responsiveness of the system. With Azul Platform Prime, you can finally realize the full value of your Cassandra deployment.

Benefits of Deploying Cassandra on Azul Platform Prime

- Maximize the number of requests your Cassandra clusters can handle and minimize the time it takes to serve them
- Improve QoS eliminating Java GC-caused pauses, stalls and failures
- Meet your SLA targets with fewer AWS instances or fewer servers, reducing Opex and Capex
- Stop struggling with JVM tuning
- Deploy Azul Platform Prime with zero coding

Out of the box, Azul Platform Prime reduces peak disruptions to a few milliseconds. You will immediately see better performance and responsiveness for your Cassandra-based applications. With Azul Platform Prime, you can beat competitors to market, meet service delivery standards and eliminate disruptions, glitches and pauses for a better customer experience and increased revenue.

Azul Platform Prime is Fully Certified for Cassandra

Azul Platform Prime is fully certified for Cassandra Azul Platform Prime is certified with Cassandra and DataStax as well as related Big Data technologies such as Apache Spark,™ Apache Solr™ and Apache Hadoop.™ It is fully compliant with the Java SE standard and requires no application changes or rearchitecting. Azul Platform Prime is easy to deploy, and you'll see the value right away.

Solution: An elastic Java runtime optimized for Cassandra

Azul Platform Prime guarantees response time consistency, improves quality of service and reduces operating costs for Cassandra. Azul Platform Prime is proven in Cassandra deployments ranging from just a few nodes to thousands of server instances.

Ideal Use Cases for Cassandra on Azul Platform Prime

- Real-time messaging
- Online financial services
- Website personalization
- Payment systems
- Web-scale ecommerce
- Time-critical decision support
- Credit card fraud detection
- Analytics

Get Started Today

Azul Platform Prime has been optimized by Azul to improve the overall performance of Cassandra, allowing you to fully achieve the results you expect from your investment. Azul's Cassandra experts will work with you to demonstrate how Azul Platform Prime will allow you to meet your performance, availability, SLA and throughput targets without recoding or re-architecting.

Customer Success: Feedzai Fraud Protection

Problem: Processing pauses caused by a legacy JVM were causing fraudulent transactions to be missed, which created unplanned losses for card issuers.

Solution: Azul partner Feedzai has a Cassandra-based real-time fraud detection system that uses Azul Platform Prime to ensure maximum streaming write throughput. With Azul Platform Prime, Feedzai can meet even the most demanding SLAs from some of the world's largest financial

> ***"The real-time analysis of data*** *to prevent fraud in the financial industry is key to predicting and preventing fraud. It's almost impossible to have ultralow latencies – in the range of 5-10 milliseconds with a standard JVM – and our customers demand that. Azul powers the largest banks in the world and with peak load demands of up to 50,000 transactions per second, Azul Platform Prime will help ensure that we can deliver the best that artificially intelligent machines can offer."*

Nuno Sebastiao, CEO of Feedzai

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