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RETAIL & eCOMMERCE

PriceRunner Compares Prices
for 100 million Offers in Milliseconds

PRICERUNNER COMPARES PRICES FOR 100 MILLION OFFERS IN MILLISECONDS

USE CASE: eCommerce

eCommerce retailers must pamper their customers, especially during the holiday season. Online shoppers will abandon a site if a page takes too long to load. In today's "Now Economy," consumers demand highly relevant and hyper-personalized experiences as they interact with brands on a multitude of devices and channels, expecting a seamless shopping journey. They want offers and services that are customized to their needs based on past purchases and seasonality. To be able to offer a highly personalized shopping experience, online retailers must consolidate and analyze the customers' real-time and historical data from all engagement channels, in the moment.

40%
OF CONSUMERS
will leave a page that takes longer than three seconds to load

79%
OF SHOPPERS
are less likely to return.

Customer   PriceRunner

PriceRunner, is a leading shopping comparison site with a mission to make shopping easier by finding the best deals for its users.

Operating in Sweden, Denmark, the UK, France, Germany and Austria, PriceRunner receives prices from 18,000 different merchants and has 4.4 million unique visitors per month. The company selected GigaSpaces In-Memory Computing Platform as the core technology to support its strategy to become the number one price comparison service in the Nordics. GigaSpaces In-Memory Computing Platform provides a load-balanced environment that can flexibly and quickly scale out when necessary, without compromising performance and speed.

Business Challenge

PriceRunner needed to ensure real-time comparisons for their customers, especially at high peak periods such as the night before Black Friday when traffic increases by 20 times more than normal traffic.

18,000
DIFFERENT MERCHANTS

4.4
MILLION UNIQUE VISITORS

100
MILLION PRICES UPDATED

5-8
MILLISECOND PERFORMANCE

Technical Challenge

Support scalability requirements at during seasonal peaks, without compromising performance

No downtime

Real-time analytics on transactional data

Event-driven applications powering integrated applications

Microservices architecture for rapid development and deployment

Solution

GigaSpaces In-Memory Computing Platform, which provides a load-balanced environment that can flexibly and quickly scale out when necessary, without compromising performance and speed.

"Based on our successful deployment with GigaSpaces, we are looking towards enhancing our services with advanced analytics", said Roger Forsberg, CTO with PriceRunner. "Innovation is a key tenant of our strategy, and adoption of GigaSpaces InsightEdge real-time machine learning technology will highly differentiate our services by enabling us to run advanced analytics models on our hot data and instantly predict prices to improve the customer experience."
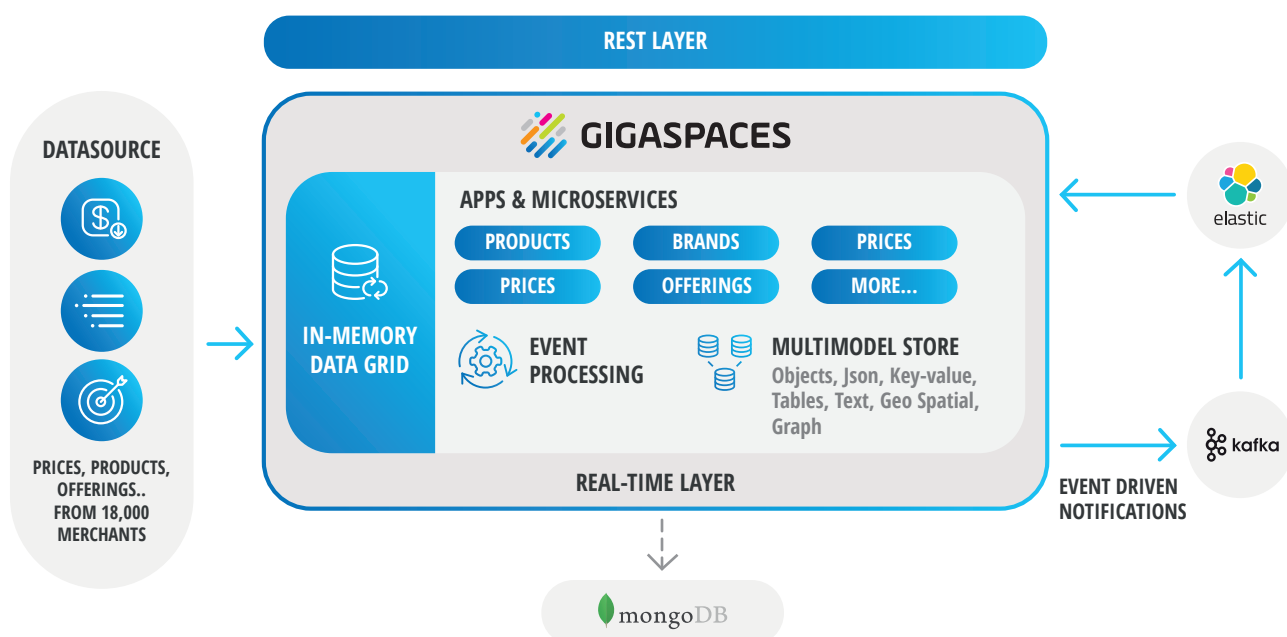
REST LAYER

DATASOURCE

PRICES, PRODUCTS, OFFERINGS.. FROM 18,000 MERCHANTS

GIGASPACES

IN-MEMORY DATA GRID

APPS & MICROSERVICES

PRODUCTS   BRANDS   PRICES

PRICES   OFFERINGS   MORE...

EVENT PROCESSING

MULTIMODEL STORE
Objects, Json, Key-value, Tables, Text, Geo Spatial, Graph

REAL-TIME LAYER

elastic

kafka

EVENT DRIVEN NOTIFICATIONS

mongoDB

Figure 1: PriceRunner Architecture

Results

Scalability while retaining performance using the elasticity of GigaSpaces' In-Memory Computing (IMC) approach:

At peak traffic spikes of 20 times normal traffic, and updating 100 million prices in parallel, response time rose from 5ms to 8ms for the 95th percentile of the product page endpoint.

The service is never down, ensuring high levels of customer experience and satisfaction, powering PriceRunners leadership in Scandinavia.

Microservices architecture, allows for rapid development and deployment of multiple services.

Integration with big data ecosystem supporting persistence to MongoDB, and ElasticSearch.
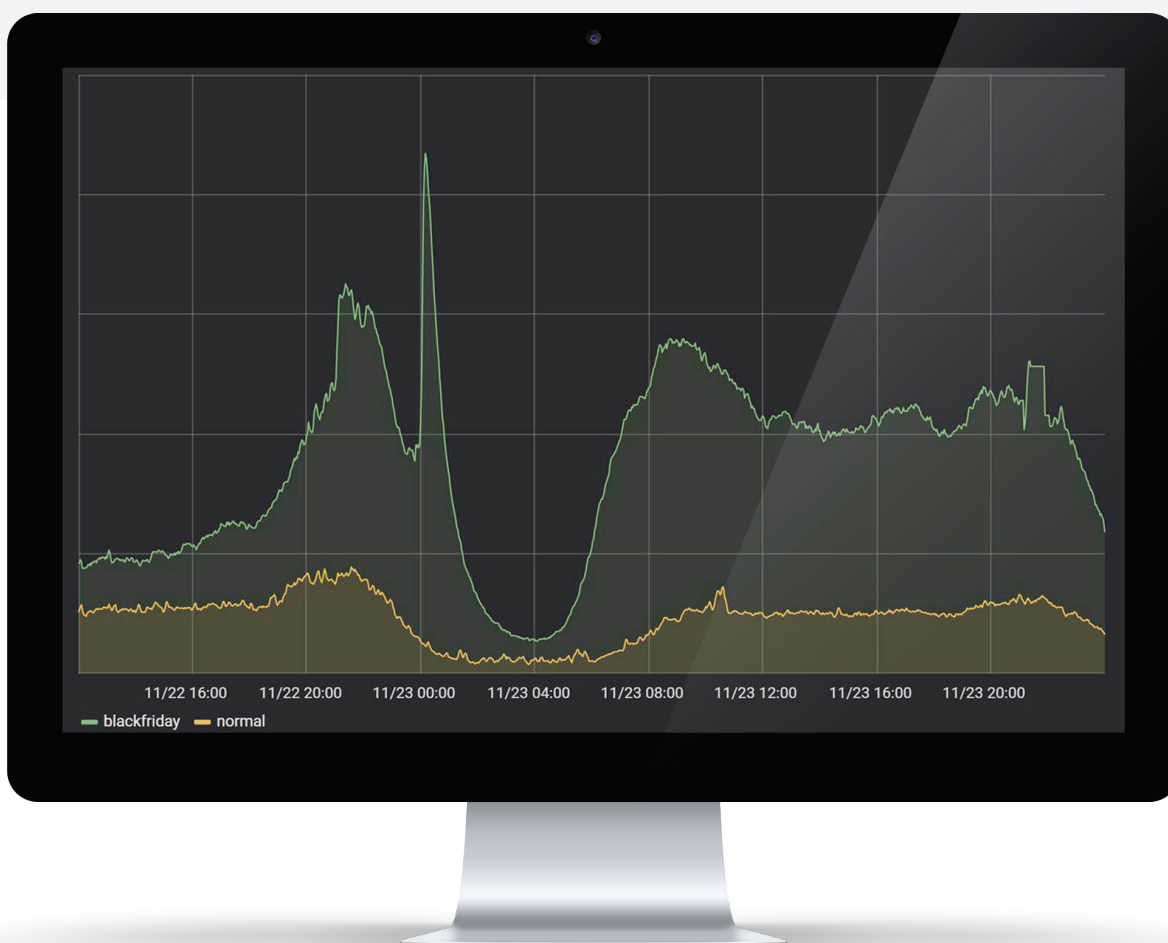

Figure 2: Peak load of 20X normal traffic on Black Friday

ABOUT GIGASPACES

GigaSpaces provides leading in-memory computing platforms for real-time insight to action and extreme transactional processing. With GigaSpaces, enterprises can operationalize machine learning and transactional processing to gain real-time insights on their data and act upon them in the moment. The always-on platforms for mission-critical applications across cloud, on-premise or hybrid environments, are leveraged by hundreds of Tier-1 and Fortune-listed organizations worldwide across financial services, retail, transportation, telecom, healthcare, and more.

"InsightEdge helps users unlock immediate insights right as data is born, empowering time-to-analytics at subsecond scale. Unifying transactional and analytical data in a single strong, consistent transactional layer enables closed-loop analytics where immediate insights instantly impact associated applications for improved business value."

**Everyone Wants 'Real-Time Analytic Insights'
But Which Architecture Will Get You There?**

Frost & Sullivan

300+
Direct Customers

50+/500+
Fortune/Organizations

5,000+
Large installations
in production (OEM)

25+
ISVs

BENEFITS

INSTANT INSIGHTS TO ACTION

Unlock immediate insights right as data is born, enriched with historical data, empowering time-to-analytics-to-action at sub-second scale. Event-driven analytics and business logic trigger analysis and action at the right instant. Predictive analytics from SQL, streaming, machine learning through Apache Spark and deep learning with Tensor Flow and other frameworks.

TCO OPTIMIZATION

Simplified architecture eliminating cluster and component sprawl complexity, radically minimizing the number of moving parts. Cloud-native, infrastructure-agnostic deployment, for cloud, on-premise and hybrid environments. Intelligent multi-tiered data storage across RAM, SSD Storage-Class Memory (3DXPoint), Persistent memory reducing storage costs by 10X while retaining in-memory speed.

EXTREME PERFORMANCE

Ultra-low latency, high-throughput transaction and stream processing. Co-location of applications and analytics to act on time-sensitive data at millisecond performance.

MISSION CRITICAL AVAILABILITY

Always-on battle-tested platform for mission critical business continuity. Highly available with at least 5 nines reliability, auto-healing and zero single points of failure. Geo-redundancy, fast data replication and native persistence for rapid disaster recovery.

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