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At Kiabi, data-driven insights hold the key to profitable business growth

KIABI
la mode à petits prix

Business

– Global retailer of ready-to-wear fashion at affordable prices

Challenges

– Legacy data management platform was unable to support real-time analytics in a high-volume global retail environment

Outcomes

– Analytics on sales data for 20 million customers

– Querying 800 million records

– Response times up to 200x faster than existing database

– Scaling to terabyte data-sets

– 10x reduction in physical data size

– Migration path to SQL-in-Hadoop

Data is the New Black

In the fashion world, the name Kiabi is synonymous with affordable ready-to-wear apparel for the entire family. The French retailer opened its first store over 30 years ago and surpassed 1.5€ billion in revenues in 2015. More than 20 million people visit the company's 500 outlets and its online store to shop for quality clothing and accessories at sensible prices.

The global apparel market is predicted to reach 1.8€ trillion by 2025,* propelled by data-driven business insights. Knowing this, Kiabi has positioned itself for growth by investing in a robust retail infrastructure powered by technologies such as the Actian Analytics Platform.

According to Jean-Francois Rompais, Kiabi, Head of IT Architecture, "We succeed by offering merchandise with the greatest appeal to the greatest number of customers at the right price. It's a high volume business, but without timely and accurate information about the impact of our marketing programs, how can we make our best business decisions? And the higher the sales volume, the bigger this challenge becomes."

Analyzing Markdowns, Maximizing Profits

As Kiabi continued to grow, it became clear to Jean-François and his team that the company's existing Oracle relational database lacked the proper structure, flexibility or scalability to support real-time and historical analysis of sales and marketing data at massive scale.

"We needed to do more data mining, to collect more data and support predictive analytics on our markdowns so we could improve our marketing campaigns proactively. There wasn't enough information in our data warehouse to know which marketing offers were driving the best results behind our markdowns. And this included both our active and passive marketing offers."

"For example, if we sold a 10€ item for 5€, what was the source of the markdown? It might have included 2€ for a customer loyalty program, 2€ for a special promotion, and 1€ for a voucher; or it might have resulted from a different mix of marketing promotions. We turned to Actian Vector to achieve this high level of data-driven insight."

Actian Outperforms Oracle

"One of our technology partners invited us to a capabilities presentation of the Actian Analytics Platform. What we saw in the presentation convinced us to evaluate Actian against our existing database.

Querying Kiabi Sales History

One month of data

One year of data

Two years of data

Ten years of data
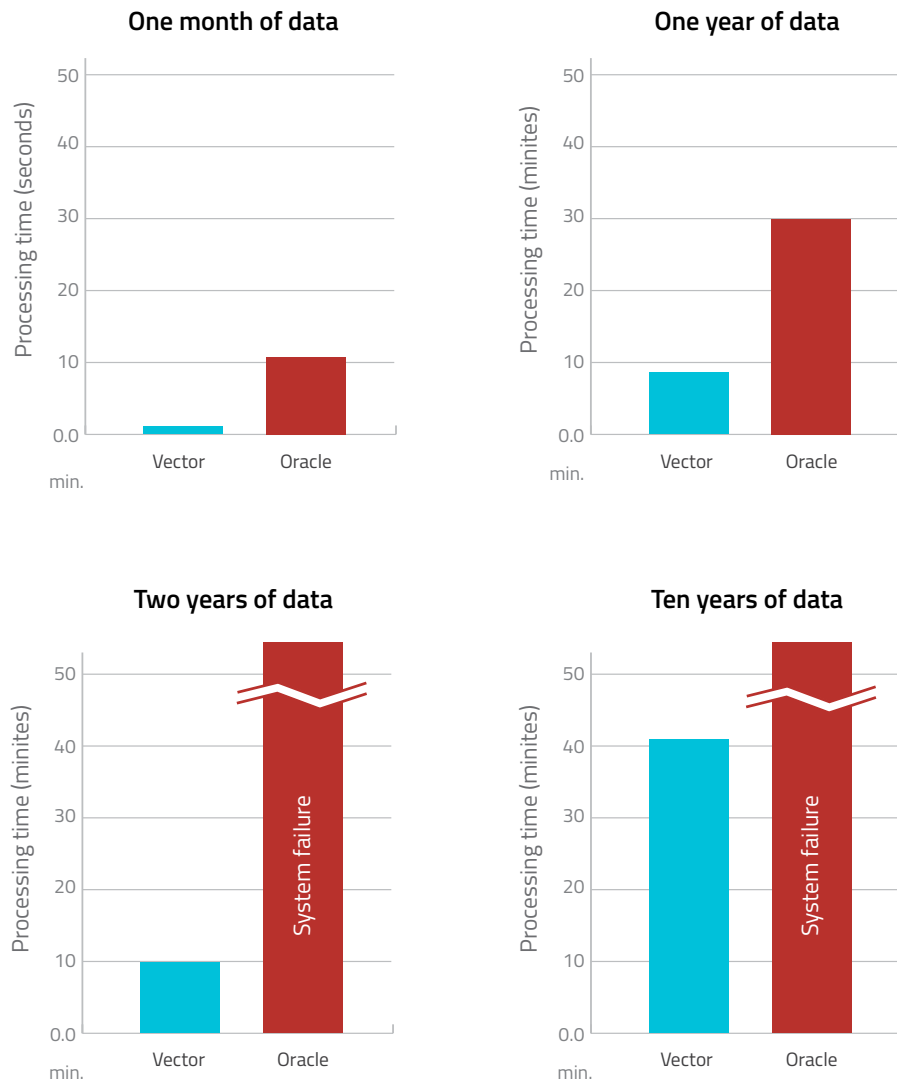
One-month history: Results, averaged for tested requests:
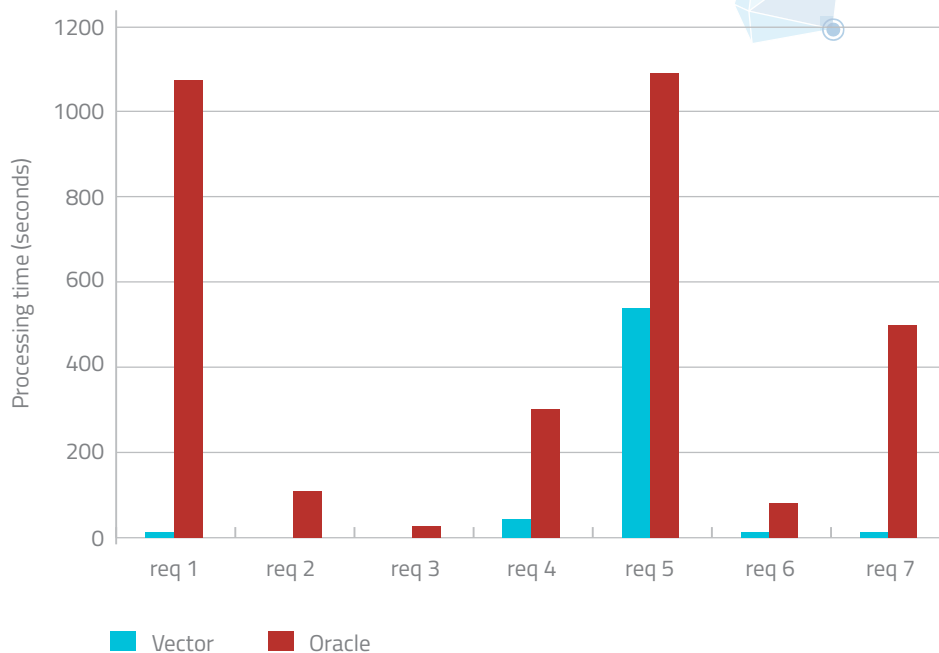
Column-based storage – disk I/O is minimized by accessing only relevant data software, thus Vector requires only a capacity storage system but not the fastest ones on the market!

"During our Proof of Concept, we evaluated database performance using different use cases and database queries. We installed Actian Vector on inexpensive generic hardware without any manual database tuning to see what its on-chip caching and smart compression could do. Actian Vector performed 2x to 200x faster than Oracle. Actian performed so well we did not have to look at competing solutions."

"Actian Vector's columnar parallel processing architecture met our needs for an analytic database solution. We saw that we could scale to terabyte data-sets without sacrificing performance, and we could do it cost-effectively. To attempt this with Oracle would have been too costly and labor-intensive."

Jean-François said the Actian Analytics Platform was "quick and easy to deploy into production and it has worked like a dream since day one."

Empowering Business Users

"Today, we can handle 800 million records and beyond. Our business users are able to analyze all of our markdowns, and with a much finer grain. They can drill down and gain insights into sales and marketing performance that weren't available to them before we adopted Actian Vector. Queries are very fast, and we've reduced data volumes by an order of magnitude."

"Having the full ANSI SQL support of Actian Vector is also important to us. Kiabi and its partners have deep roots in SQL culture. Over time we've adopted new Java-based frameworks and tools, some of which hide the SQL. But for our developers and IT staff, having knowledge of the database and its structure is important. We appreciate Actian Vector because it offers transparency and gives us access. We're very efficient because we are compliant."

"We were 18 months into production before there was any need for support. It isn't always the case with technology vendors, but our relationship with Actian is more like a partnership. Recently we brought in the Actian professional services team to perform a Technical Audit. Our IT staff found them more than willing to explain database particulars and provide useful advice. They're coming back to train our staff on best practices as we upgrade to the latest version of Actian Vector."

"Phase one of our project focused on pulling data from our outlets for markdown analysis. We completed phase one with very positive results, thanks to Actian Vector. We've been able to move sooner into phase two, deploying our web integration and pulling data from our online stores."

The Actian Analytics Platform underpins Kiabi's use of business intelligence (BI) tools including Business Objects and Tableau Software. Integration between the database and BI tools is transparent to the business users, freeing them to focus on analyzing sales and marketing programs to gain deeper insights and improve decision-making.

Kiabi also plans to extend Actian Vector to new use cases, such as measuring sales performance against commission, and measuring customer response across multi-channel marketing programs.

Kiabi Looks Ahead

"Going forward, our data management platform needs to handle not only more volume, but more types and sources of data. Our team is building out a big data infrastructure with Cloudera Hadoop to meet this need. The missing piece is a really fast SQL engine. We consider Actian Vector on Hadoop database to be an excellent candidate among the solutions we are considering and look forward to seeing how it performs running on our Hadoop cluster."

Actian tested to run 30x faster compared with Cloudera's Impala solution. This was one factor for consideration in testing. However, Kiabi looked at the much bigger picture to address complexity, cost, security and test on real business cases.

Generational Leap in Analytic Performance

Actian Vector is ideal for BI, reporting and analysis. It accelerates time to insight. Actian Vector is designed from the ground up to remove the performance bottlenecks so often encountered when using relational databases. Rather than burdening database administrators with extensive or ongoing database tuning, results are achieved by unlocking performance features already available in modern CPUs.

- **Vector processing** – a patented Actian technology whereby a single instruction can be performed across data sets

- **Column-based storage** – disk I/O is minimized by accessing only relevant data

- **On-chip cache computing** – data processing on chip cache is 100x faster than in RAM

- **Smarter compression** – compression is performed inside the CPU for maximum throughput

- **Parallel execution** – data is processed in parallel using any number of CPU cores

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