STARCOUNTER

Case Study
Heads – Real-time retail application

Summary

Heads, a real-time application provider, built its supply chain management application on the NoSQL database Starcounter. With high performance from Starcounter, the supply chain management application can keep all point-of-sales for customers connected to headquarters and, combined with real-time warehouse balance, get an efficient flow of articles through stores.

The challenge

✔ Improve performance
✔ Handle large volumes of data in real-time from huge numbers of simultaneous users
✔ Decrease number of hours of executing backlogs
✔ Keep data consistent
✔ Maintain low infrastructure costs

When software developer Heads was developing their supply chain management application, they wanted to provide a real-time environment in order to keep all business data centralized and updated at all-time throughout the entire product supply chain. Heads would need to handle hundreds of thousands articles and products, thousands of business transactions per second and keep the traceability unbroken at all time and for all items. Also, transactions and business data from individual stores in a chain had to aggregate in real-time in order to optimize the supply chain and minimize store warehouse balance.

The evaluation criteria

✔ Performance
✔ Real-time environment
✔ Backlog execution time
✔ Whole workflow in one system
✔ Price

Heads required extreme performance from a database that could also handle the large number of transactions, and unbroken traceability for all items and centralized data handling from hundreds of different data sources. The vision was to make it possible to run the whole workflow in one system; supply chain management, stock management, CRM, point of sales, BackOffice and Display. Heads wanted to provide a solution that was cost efficient, and therefore hardware needs and licenses costs were therefore key decision points as well.

The solution

Heads chose Starcounter after careful research and evaluation of several different databases, primarily looking into traditional SQL databases. The Starcounter in-memory database met all the decision criteria, including a native object interface and extreme performance.

> In a world where 'retail is detail,' the Starcounter database is a 'must have' to handle millions of products and transactions in real-time with full traceability."
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> **Johan Ericsson, CEO, Heads**

Heads supply chain management System's powerful application is able to compete with existing highly recognizable ERP applications for the retail business because its unique features give the customer advantages which would normally require a much larger investment in other ERP systems to achieve.

Heads supply chain management System is an application that integrates and streamlines the entire supply chain; from real-time warehouse balance visibility through procurement and delivery of goods to central and store warehouses to end customer sales and receipts completing the supply cycle. Unlike other ERP systems for retail, by using Starcounter's in-memory database, Heads can give its customers a unique combination of business advantages, including enabling high performance combined with acid transactions and an unbroken traceability of all items in real-time.

Starcounter in-memory database also enables a significantly lower TCO compared to other systems, due to a reduction of the infrastructure investment and maintenance by two-thirds and more accurate business data at all instances in the supply chain.

The technical platform is .NET and Visual Studio 2010. The scalable solution with low server hardware requirement makes it possible to implement as cloud service, allowing Heads to create flexible license models.

ROI

✔ Competitive advantage with cutting-edge performance
✔ Cuts development expenses
✔ Cost savings in bug tracking
✔ Lower TCO for customers
✔ Reduces infrastructure investments