

DataStax Enterprise Provides Kapsch CarrierCom with Full Data Control

THE CHALLENGE

As part of its solutions portfolio, Kapsch CarrierCom required a database management system that is designed to handle mission-critical tasks with continuous availability, high scalability, and fail-safe performance.

“We needed a solution that does not suffer from bottlenecks or scalability limitations, but on the contrary is really ‘always on,’ provides absolute failsafe performance for mission-critical tasks, includes analysis tools, and furnishes a highly reliable support system,” said Josep Colom Ikuno, Business Solutions Manager at Kapsch CarrierCom.

To meet the needs of its data-driven businesses, Kapsch CarrierCom chose DataStax Enterprise (DSE), built on Apache Cassandra™ for mission-critical applications, as part of its solutions portfolio. For example, Kapsch CarrierCom needed a highly scalable database and data management solution to store event data from a SaaS-based IoT platform application that serves a utility company customer.

There were many things to consider. The platform needed to be coupled with the sensors in real time and also provide analysis and security features. The utility company generates enormous amounts of data every day—data that has to be processed quickly, safely, and easily. For this purpose, the company’s database needed to be:

- Highly scalable, enabling large SaaS implementations for multiple customers simultaneously as well as on-premises single-customer implementations.
- Easy to set up because complex setup procedures tie up too many resources needed to develop and test functions.
- Extremely stable and reliable (especially for on-premises implementations).

To simplify development and avoid having to maintain different software versions, it was important for Kapsch CarrierCom to be able to use the same database vendor for on-premises and SaaS implementations of its applications.

CUSTOMER 360° & REAL-TIME PERSONALIZATION

USE CASE:

Asset Monitoring (IoT)

INDUSTRY:

Telecommunications and Mobility

CHALLENGES:

- Needing to handle large-scale SaaS implementations for multiple customers simultaneously as well as on-premises single-customer implementations.
- Complex database setup procedures that tie up too many resources needed to develop and test functions.
- Scalability and reliability issues, especially for on-premises implementations.

SOLUTION:

- DataStax Enterprise with the best distribution of Apache Cassandra™.

RESULTS:

- Quick and effective implementation.
- ‘Always-on’ availability and linear scalability for storage of inbound event data from IoT devices as well as new data generated from processing.
- Flexible implementation across a variety of cloud environments as well as on-premises.

ABOUT KAPSCH CARRIERCOM:

Kapsch CarrierCom, a Kapsch Group company, is a global developer of end-to-end telecommunications solutions for mission-critical networks. The innovative technologies, products, and services cover the entire value chain, planning, developing, producing, deploying, maintaining and operating. Kapsch CarrierCom is a leading expert in the Global System for Mobile Communication-Railway (GSM-R) standard. In addition, the company is growing its portfolio to address PS-LTE (Public Safety LTE) use cases as well as the next generation of railway communication networks. Kapsch CarrierCom also offers PMR (Private Mobile Radio) networks based on TETRA (Terrestrial Trunked Radio) and DMR (Digital Mobile Radio) standards. Its international customers include leading railway operators, utilities, public authorities, transport operators and airports. The company is headquartered in Vienna and serves customers in more than 25 countries.



THE SOLUTION

In searching for its database management solution, Kapsch CarrierCom evaluated various relational and NoSQL options and quickly ruled out relational solutions because they did not provide enough performance for the design requirements.

An extensive market evaluation showed that of all the NoSQL solutions available, only DSE provided the required maturity and stability coupled with a simple implementation. DSE was also the best option from a cost standpoint, since using the pure open source solution would have put significant strain on in-house resources.

DSE's open source foundation was an additional and very attractive plus for Kapsch CarrierCom, since it broadens the application base, provides an active, feedback-driven community with product enhancements, and is perceived as positive by potential customers.

"DataStax Enterprise is extremely easy to maintain in operation," Ikuno said. "From a management perspective, we do not spend a lot of time with the system. One can only describe our experience with Cassandra as 'effortless.'"

DSE's masterless architecture ensures always-on availability and linear scalability for storage of inbound event data from IoT devices as well as new data generated from processing. In the example of the utility

company, the data memory contains both the homogenized, processed data and the original data. The data storage is structured to allow the implementation of custom applications based on data analysis.

DSE's built-in analysis capabilities based on Apache Spark™ will be used to meet customer needs. The main uses for the utility company's IoT platform are reporting and live dashboards. Such applications may include, for example, the correlation of geolocation data with sensor data, geodata measurements over time, time series analysis with statistical base, and event dynamics or combinations of different sensor inputs.

THE RESULTS

Kapsch CarrierCom received support from DataStax early on but little to no support was required thereafter, showing the ease with which DSE can be quickly and effectively implemented. DSE's simplicity and ease of management (updates, upgrades, etc.) make it very popular with both the development team and the team providing the solution.

"The building blocks that we choose for our solutions are based on the requirements and we always strive to consider only the best solutions from a holistic perspective," Ikuno said. "This includes analyzing each option from different angles so that we can deliver the best product to our customers. We are always open to new products if they fit. We can say that DataStax Enterprise is the exact right choice for this application. Easy to implement, highly scalable, absolutely reliable, and it includes professional support as well."

ABOUT DATASTAX

DataStax delivers the only active everywhere hybrid cloud database built on Apache Cassandra™. DataStax Enterprise and DataStax Distribution of Apache Cassandra, a production-certified, 100% open source compatible distribution of Cassandra with expert support. The foundation for contextual, always-on, real-time, distributed applications at scale, DataStax makes it easy for enterprises to seamlessly build and deploy modern applications in hybrid cloud. DataStax also offers DataStax Managed Services, a fully managed, white-glove service with guaranteed uptime, end-to-end security, and 24x7x365 lights-out management provided by experts at handling enterprise applications at cloud scale. More than 400 of the world's leading brands like Capital One, Cisco, Comcast, Delta Airlines, eBay, Macy's, McDonald's, Safeway, Sony, and Walmart use DataStax to build modern applications that can work across any cloud. For more information, visit www.DataStax.com and follow us on Twitter [@DataStax](https://twitter.com/DataStax).

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