An international logistics company needed to build a new data platform for tracking and real-time routing of upwards of five million parcels per day.

The business operates 24/7/365, serving internal as well as B2B and B2C clients. The solution handles peak loads of three thousand routing calculations per second and integrates with a mixed software stack in a message-driven architecture. The project was implemented in 8 months—from design/POC to production—with Neo4j as the database supporting real-time routing, and maintaining the single source of truth for the logistics network. The system went live 2 months before its seasonal peak, scaling smoothly through maximum workloads, and running without a hitch.

**Situation**

One of world's largest international logistics carriers had reached the capacity of its routing database and turned to a global leader in IT consulting to implement a solution. Dominik Wagenknecht, a technical architect, led the team in the design and planning of a new data platform that would integrate with legacy applications and database systems to increase capacity for real-time routing and tracking. The goal was to find a solution to deliver 24/7/365 service to speed up operations and ensure scalability for business growth.
Why Neo4j?

“A logistics network is a graph, and doesn’t fit the table structure of a relational database well,” says Wagenknecht. The team chose Neo4j for its flexibility and scalability. With Neo4j’s native graph storage and processing engine, transactions took milliseconds, not minutes, for high-speed, full graph, database traversals.

Benefits

The new data platform scales easily: to deliver reliability, scalability and extreme performance, using substantially less hardware than the other options on the table. The client wanted flexible connections between areas of business that had been restructured.

“Growing companies need to break and reconnect lines, and Neo4j handles this really well,” says Wagenknecht. “Being able to receive data from external data sources, and leverage Neo4j for the routing calculation, as well as the master source of route data, has been a big technical and cost benefit.”

Business constantly evolves, and Neo4j’s flexibility supports its need to change rapidly when it needs to.

“We brought the entire logistics network to Neo4j to give unparalleled flexibility.”

–Dominik Wagenknecht, Technology Architect

Neo4j provides easy scaling and mission critical reliability, as well as a lot of agility for the Java developer a relational database, to try to inject additional relationships would.