

Success Story Templates

NCC Estonia

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Industrial HPC Course



EURO

SUCCESS STORY: AUTONOMOUS VEHICLES

COMPANY: BOLT

Bolt is an Estonian mobility company that offers vehicle for hire, micromobility, car-sharing, and food delivery services headquartered in Tallinn and operating in over 400 cities in over 45 countries. In partnership with the University of Tartu, the company develops self-driving technology for a Level 4 autonomous car.

THE PROBLEM

Autonomous car engineers needed a system to store and easily access test logs.

SUCCESS STORY DETAILS

HPC provider: University of Tartu HPC Centre
Domain Expert: Autonomous Driving Lab, University of Tartu
Country: Estonia

THE HPC PROBLEM DOMAIN

Artificial intelligence
Data analysis
Machine learning

THE SOLUTION

Acquired test logs are copied to HPC storage, into appropriately guarded directory. Regularly cron job processes those log files into metadata stored in MongoDB database. Processing is distributed over cluster and happens in parallel. On top of MongoDB sits custom-made application that allows filtering of test sessions and browsing them using Webviz visualization tool. Visualization tool accesses the raw sensor data from HPC storage.

THE BENEFITS

Custom database application and visualization tool enables easy analysis of the logs. Thanks to distributed processing in the cluster the metadata about the drives usually shows up already next morning.

SUCCESS STORY: AUTONOMOUS VEHICLES

THE PROBLEM

Autonomous cars acquire up to 357 GB/hour of data during test drives. Autonomous car engineers needed a system to store and easily access those test logs.

THE HPC PROBLEM DOMAIN

Artificial intelligence
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THE SOLUTION

Acquired test logs are copied to HPC storage, into appropriately guarded directory. Regularly cron job processes those log files into metadata stored in MongoDB database. Processing is distributed over cluster and happens in parallel. Longest logs can take up to 24 hours to process, so processing them sequentially would be very time-consuming. On top of MongoDB sits custom-made application that allows filtering of test sessions and browsing them using Webviz visualization tool. Visualization tool accesses the raw sensor data from HPC storage.

THE BENEFITS

- Thanks to petabytes of storage at the HPC Centre, the company can keep all the data they need
- Thanks to distributed processing in the cluster the metadata about the drives usually shows up already next morning
- Thanks to custom database application and visualization tool the team members can easily analyze the logs and share their findings with each other