



Case Study

Server

Robert Bosch Car Multimedia GmbH

On the search for a more cost-efficient platform to run its software development and data processing systems, the Data Production department of Bosch Car Multimedia deployed SUSE® Linux Enterprise Server. As a result, the department lowered IT costs while maintaining high levels of system availability and reliability. Built-in configuration tools ensure easier, more efficient administration, while vendor certifications and access to comprehensive SUSE support give the department peace of mind.



Overview

Bosch Car Multimedia, part of the Bosch Group, develops smart integration solutions for in-car entertainment as well as navigation, telematics and driver assistance functions used in the original equipment business. Headquartered in Hildesheim, Germany, Bosch Car Multimedia supplies its products to leading car, truck and coach manufacturers from all around the world. The Bosch Group is a leading global supplier of technology and services. The company employs around 360,000 associates worldwide and generated sales of EUR 49 billion in 2014.

“SUSE Linux Enterprise Server provides excellent availability, reliability and stability at a highly competitive price. The operating system has proven to be rock-solid and it also gives us the reassurance of on-demand access to SUSE support specialists at any time.”

MICHAEL LANGE

System Administrator
Robert Bosch Car Multimedia GmbH

Challenge

The Data Production department at Bosch Car Multimedia compiles geographical data from a number of different sources and distributes the processed information on media including CDs, DVDs and SD cards for use in its navigation systems.

Geographical data, covering everything from longitude and latitude of streets and addresses to points of interest like service stations, is delivered from external data suppliers to the department in raw formats. The team's job is to convert this data so that it can be used in Bosch navigation devices to calculate optimized routes.

As well as delivering the re-formatted data to other internal departments, the Data Production team sends it directly to affiliated manufacturers for use in their navigation solutions.

The team processes the geographical data using specialized software developed in-house using various programming languages including C, C++, Java and Python. Michael Lange, System Administrator at Bosch Car Multimedia remarked: “The former environment we were using to run our software development and continuous integration systems, as well as the actual distributed processing of the



BOSCH
Technik fürs Leben

Robert Bosch Car Multimedia at a Glance:

Headquartered in Hildesheim, Germany, Robert Bosch Car Multimedia GmbH produces intelligent in-car navigation and entertainment systems for the world's leading automotive manufacturers.

■ Industry and Location

Automotive, Hildesheim, Germany

■ Product and Services

SUSE Linux Enterprise Server

■ Results

- + Reduced IT expenditure thanks to lower subscription and maintenance costs
- + Improved system reliability, supporting smooth operations 24/7
- + Ensured rapid response to security threats with excellent patch availability

geographical data, was becoming more and more cost-inefficient. We wanted to drive down IT costs without compromising on performance and decided to look for a more cost-efficient solution.”

To supply other departments and external partners with the processed and optimized data in a timely manner, the team runs its servers 24 hours a day. System availability and reliability are therefore critical criteria. To make sure that it could reliably provide its data services to internal and external partners, the department had to ensure that any alternative to the existing configuration would be able to perform equally well—or better—under heavy load.

Solution

CHOOSING SUSE

Bosch Car Multimedia evaluated several different Linux distributions and selected SUSE Linux Enterprise Server as the operating system for its always-on development systems and data processing clusters. The team deployed the solution on commodity x86 servers, contributing to the overall cost savings.

Michael Lange said: “Some of the other solutions we considered deploying had a lot of the same attractive features but lacked the long-term support and certification of the SUSE Linux Enterprise Server distribution, both of which were key deciding factors.”

In addition to being fully certified and supported by server and application vendors such as Fujitsu, HP, IBM, and Oracle, SUSE

Linux Enterprise Server also offers much more cost-efficient subscription options. “We chose SUSE Linux Enterprise Server because it would help us lower our IT costs on top of providing all the features we needed for reliable operations,” continued Michael Lange. “It was a win-win situation.”

Also supported by SUSE Linux Enterprise Server is Grid Engine, a batch-queueing management tool. The department uses Grid Engine to manage job interdependencies and distribute the various processing tasks across the entire cluster for fast and efficient transformation of geographical data and optimal resource utilization.

ENSURING SYSTEM SECURITY

Vendor certification and support were particularly important considerations in the choice of operating system, as Bosch is well-known and respected for its high security standards. The company constantly monitors system security to identify potential threats rapidly and deploy appropriate patches company-wide across all systems without delay. To meet high security requirements, internal departments often have to install security fixes within tight deadlines.

For example, internal service level agreements may require teams to close a critical OpenSSL bug within just 36 hours—without fast and reliable delivery of patches from SUSE, this kind of deadline would be almost impossible for the Data Production department to adhere to. Bosch takes security very seriously and could shut down a team’s system landscape if it were not able to patch fast enough.

Andreas Wolf, Database Administrator, Data Production at Bosch Car Multimedia, elaborated: “We cannot risk such a disruption, so we really need fast response to threats at any time. Access to timely patches and, if needed, support from SUSE, is therefore one of the biggest advantages of choosing SUSE Linux Enterprise Server.”

HIGHEST AVAILABILITY AND EASY CONFIGURATION

Offering extremely high availability, SUSE Linux Enterprise Server is a robust operating system. The Data Production department uses almost 100 instances as its development platform, for the continuous build system, and for its distributed data processing solution, which runs on a parallel cluster.

“Thanks to the built-in YaST® and AutoYaST configuration tools, these environments are now much easier to manage than previously,” said Michael Lange.

Results

DRIVING DOWN COSTS

With SUSE Linux Enterprise Server, the department gained the stable, reliable and easy-to-use platform that it needed for its development systems while reducing IT expenditure, thanks to lower investment, maintenance and subscription costs.

Andreas Wolf commented: “All of the software that we use is fully supported on SUSE Linux Enterprise Server. We are very happy with the comprehensive administration tools and the fact that it’s easy to integrate our own applications into the

package management processes. System administration is certainly easier and more efficient than in the past.”

A RELIABLE PLATFORM, READY FOR FUTURE CHALLENGES

SUSE Linux Enterprise Server plays a very important role in ensuring smooth operations within the department, and also at Bosch Car Multimedia as a whole. The entire group division relies on the Data Production team to provide geographical

data for navigation products—and to deliver this information quickly, the team relies on the SUSE Linux Enterprise Server.

In addition to supplying this information via CDs, DVDs and SD cards, Bosch Car Multimedia plans to introduce online updates to make the latest data available to development teams, partners and also customers much faster. To cope with this, and other future challenges, the Data Production department must be able to

scale up its environment easily and further streamline provisioning and management processes.

Michael Lange concluded: “SUSE Linux Enterprise Server provides excellent availability, reliability and stability. The operating system has proven to be rock-solid and it also gives us the reassurance of on-demand access to SUSE support specialists at any time.”

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