



University Medical Center
Schleswig-Holstein Kiel Campus

High-performance and stable IT base for biodata network



When it comes to innovations, the University Medical Center Schleswig-Holstein (UKSH) and Fujitsu are tried-and-tested partners. When UKSH went looking for a high-performance, highly scalable and easy-to-administer base for its biodata network, Fujitsu had the right solution: a Microsoft-based, hyper-converged IT infrastructure. The medical center now benefits from a highly reliable system and a latency period of less than 300 microseconds.

Challenge

The UKSH needed a high-performance, highly scalable and easy to administer IT infrastructure.

Solution

- Fujitsu PRIMEFLEX for Microsoft Azure Stack HCI
- Fujitsu PRIMERGY RX2540 servers.

Outcomes

- Ensured availability through failsafe four-node cluster
- Assured minimal latency
- Administered the solution easily and cost-effectively, thanks to Windows Admin Center and Fujitsu Infrastructure Manager.

“In developing the solution for our P2N network, Fujitsu gave us expert support from concept to implementation.”

Siegfried Troska, Administrator IT Infrastructure, University Medical Center Schleswig-Holstein – Kiel Campus

Industry:
Medicine

People:
>14,500

Location:
Germany

Website:
uksh.de/en

About the customer

As one of the biggest European centers for medical care and the second largest university hospital in Germany, the University Medical Center Schleswig-Holstein (UKSH) covers the full range of modern medicine. The UKSH provides full healthcare services for the region and beyond with 88 clinics and institutes in Kiel and Lübeck. It works together with the Christian Albrecht University in Kiel and the University of Lübeck.



<300µs

latency period for
a workload with
a 30-percent write share
for data and 400,000 IOPS

High-performance IT infrastructure for biodata network

The University Medical Center Schleswig-Holstein (UKSH) operates a bio database at the Institute for Epidemiology in Kiel, a scientific collection of biological material such as blood and urine. This material is stored and used for research in combination with the associated medical data. Analyzing the materials helps researchers, for example, better understand the origin of diseases and test new diagnostic and therapeutic methods. As part of a network called PopGen 2.0 (P2N), different scientific bio databases are combined at the UKSH's Kiel campus and at the Borstel Research Center.

To dependably map the processes in the P2N on the IT side, the medical center needs a reliable and powerful technical infrastructure. "We wanted to minimize the workload on our IT department and therefore went looking for a solution that was both easy to administer and could be flexibly scaled," explains Siegfried Troska, IT administrator at UKSH. Another requirement: The applications in the PopGen 2.0 network require a very short latency period and a high bandwidth. The IT environment had to provide sufficient performance for this purpose.

Integrated system for Microsoft-based, hyper-converged IT infrastructure

The UKSH already maintained a successful business relationship with Fujitsu. The IT provider had supplied high-quality solutions and components for the data center in the past. "When it comes to technical innovations, Fujitsu has always been happy to come to our aid as an expert consultant. Because of our positive experience, we brought our proven partner on board the new project as well," says Siegfried Troska. The UKSH therefore decided to go with a hyper-converged infrastructure based on Fujitsu PRIMEFLEX for Microsoft Azure Stack HCI. As an integrated system, it includes the complete hardware and software needed to provide a Microsoft-based, hyper-converged IT infrastructure. Powerful and energy-efficient Fujitsu PRIMERGY RX2540 x86 standard servers are used as the hardware base. The solution also includes the software-define Hyper-V server and storage technology as well as Storage Spaces Direct from Windows Server 2019 Datacenter. It can be administered very easily and cost-effectively, thanks to Windows Admin Center and FUJITSU Infrastructure Manager.

Expert support – from concept to implementation

Ever since the system has gone live, the UKSH has benefited from a high-performance and failsafe 4-node cluster based on the Fujitsu PRIMERGY server. The solution thus permits a latency period of less than 300 microseconds – for a workload with a 30-percent write share for data and 400,000 IOPS. "In developing the new infrastructure solution for our PopGen 2.0 network, Fujitsu gave us targeted and expert support from concept to implementation. As part of the PRIMEFLEX Solution Support package, we also receive expert assistance for solving problems in just two hours throughout the entire life cycle," Siegfried Troska concludes.

Fujitsu

cic@ts.fujitsu.com

© Fujitsu 2022 | 8481-49. All rights reserved. Fujitsu and Fujitsu logo are trademarks of Fujitsu Limited registered in many jurisdictions worldwide. Other product, service and company names mentioned herein may be trademarks of Fujitsu or other companies. This document is current as of the initial date of publication and subject to be changed by Fujitsu without notice. This material is provided for information purposes only and Fujitsu assumes no liability related to its use.