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High-performance and stable IT base for scientific biodata network

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.



Industry: **Medicine**



Country: **Germany**



Employees: **>14,500**



Website: **uksh.de/en**

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

"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



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< 300 μ s

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-defined 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.

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