



“With FUJITSU PRIMEFLEX for Microsoft Storage Spaces Direct, Fujitsu and Bechtle delivered a cutting-edge, hyper-convergent solution that perfectly matched our expectations regarding performance and long-term viability.”

Matthias Gerold  
Managing Partner  
Harrer Ingenieure GmbH

At Harrer Ingenieure GmbH, Fujitsu and Bechtle implemented a server/storage architecture on the basis of PRIMEFLEX for Microsoft Storage Spaces Direct.

### At a glance

**Country:** Germany  
**Industry:** Civil engineering  
**Founded:** 1960  
**Website:** [www.harrer-ing.net/en](http://www.harrer-ing.net/en)



Intel Inside®.  
New Possibilities Outside.

### Challenge

At its Karlsruhe (Germany) head office, Harrer Ingenieure operates a classic server/storage infrastructure. Since it could no longer be maintained, it was to be modernized and expanded after seven years in operation.

### Solution

Working closely with its partner Bechtle, Fujitsu implemented a high-performance and viable IT architecture on the basis of a Microsoft Storage Spaces Direct hyper-converged cluster under Windows Server 2016. In addition, various certified hardware components from Fujitsu were used.

### Benefit

- Modern, fail-safe and scalable hyper-convergent infrastructure
- Optimum price/performance ratio
- Risk minimization through transparent failover
- Stable technical basis for business expansion due to increased capacity and performance
- Reduced pressure on own IT staff through comprehensive service agreements

shaping tomorrow with you

Get in contact with a sales representative at: [cic@ts.fujitsu.com](mailto:cic@ts.fujitsu.com)



## Customer

Harrer Ingenieure GmbH has been offering independent consulting services for more than 50 years. The company's consulting portfolio ranges from development, planning and support to monitoring and testing for all areas of civil engineering. Services are focused on superstructures, structural engineering, bridges, foundations and tunnels, industrial and commercial buildings as well as project management. The portfolio is rounded off with professional services in the area of risk management and special constructions.

## Products and services

- FUJITSU Integrated System PRIMEFLEX for Microsoft Storage Spaces Direct
- 4x RX2540 – hosts for Storage Spaces Direct
- 1x RX2540 for Veeam + 2x ETERNUS JX40 S2
- 1x PRIMERGY RX1330 M2 – hardware domain controller and quorum for S2D
- 1x LT40 library with 2x LT07 FC drives
- 4x Brocade VDX6740 switches

## Renewal and expansion of the existing server/storage architecture

As a successful engineering firm, Harrer requires a powerful and stable IT infrastructure. This was the reason why the company had implemented a classic dedicated server/storage architecture at its Karlsruhe headquarters in the year 2010. The objective of this investment was to reduce maintenance costs and increase IT transparency. Since the existing infrastructure could no longer be maintained, it was to be comprehensively upgraded and expanded after seven years in operation. The IT processes at Harrer Ingenieure are completely based on Microsoft solutions. Therefore, the new architecture would also have to be entirely aligned to this technology.

Matthias Gerold, managing partner at Harrer Ingenieure GmbH, defines the other requirements: "The expansion in the storage infrastructure has to be able to support the future growth of our company on the IT side in terms of capacity and performance. In this context, the price for the hardware should not exceed the original investment costs. And a very important factor: From the manufacturer, we expect collaboration at eye level and first-class support services that match our specific requirements," says Matthias Gerold. At the technical level, the expanded infrastructure should guarantee an automatic and transparent failover. Finally, the upgraded environment should contribute greatly to reducing the total operating costs (TCO) over the long term. To successfully implement these demanding project objectives, Harrer Ingenieure searched for a suitable IT partner.

## All-in-one solution on the basis of Microsoft Storage Spaces Direct

In the context of a comprehensive benchmarking process, those in charge of IT at Harrer Ingenieure performed a full check of the server and storage components of various manufacturers. "No system in our price range was able to meet our expectations. Therefore, we decided to rely on the relatively new Microsoft Storage Spaces Direct functionality under Windows Server 2016, which we tested in a series of proofs of concept," remembers Matthias Gerold. The engineering firm finally decided to collaborate with IT system vendor Bechtel. It had offered components from Fujitsu that precisely met the technical requirements and also impressed with an excellent price-performance ratio. Another argument in favor of Fujitsu was the fact that the hardware is produced in Europe's largest computer factory in Augsburg – hence quality made in Germany. Harrer Ingenieure subsequently engaged the IT service provider with the implementation of the entire project, including the supply of high-performance Fujitsu hardware.

"The excellent quality and the fair price-performance ratio of the Fujitsu products were the decisive factors for our collaboration with Bechtel and Fujitsu. In addition, we were also impressed with the extensive consulting competence and solid technical know-how of both partners with regard to the design and equipment for computer centers," confirms Matthias Gerold.

The all-in-one solution FUJITSU PRIMEFLEX for Microsoft Storage Spaces Direct implemented by Bechtel is mainly based on the server and storage virtualization technology Storage Spaces Direct Hyper-Converged that is integrated into Windows Server 2016. The hardware components, which are certified for Storage Spaces Direct, include the FUJITSU Server PRIMERGY RX2540, FUJITSU Storage ETERNUS LT40, FUJITSU Storage ETERNUS JX40 S2, Brocade VDX6740 SAN switches as well as online UPS systems from APC.

"The collaboration with Harrer Ingenieure and Fujitsu proved to be very productive and inspiring for all parties involved – an excellent example of vibrant co-creation," states Maxim Kushnir, Infrastructure Manager at Bechtel. The experts at the system vendor migrated the existing data to the new system over a single weekend and subsequently tested the performance and optimized the system. During the course of this process, the MSPDM backup software was replaced by Veeam. Staff at Harrer Ingenieure continue to be responsible for operating the new environment. Bechtel rounds off the all-in-one solution with an operational support agreement.

## Stable technical foundation for business expansion

After going live, the new infrastructure immediately offered proof of its benefits: The entirely redundant structure secures IT operations at Harrer Ingenieure and minimizes the impact of a potential break-down on business processes. "With its higher capacity and performance, the new environment delivers a stable technical basis for further expansion. Because of the focused alignment of the IT to our business objectives and the competent support provided by our partners, we also benefit from viable business processes. And thanks to the comprehensive service agreements, our IT employees can now focus on their core competencies and initiate additional innovative projects," concludes Matthias Gerold.

## FUJITSU

Get in contact with a sales representative at: [cic@ts.fujitsu.com](mailto:cic@ts.fujitsu.com)

## IN COLLABORATION WITH

Intel Inside®. New Possibilities Outside.



© 2018 Fujitsu and the Fujitsu logo are trademarks or registered trademarks of Fujitsu Limited in Japan and other countries. Other company, product and service names may be trademarks or registered trademarks of their respective owners. Technical data subject to modification and delivery subject to availability. Any liability that the data and illustrations are complete, actual or correct is excluded. Designations may be trademarks and/or copyrights of the respective manufacturer, the use of which by third parties for their own purposes may infringe the rights of such owner.

Intel, the Intel logo, Xeon, and Xeon Inside are trademarks or registered trademarks of Intel Corporation in the U.S. and/or other countries.