

### Organization

One of the most well-known and largest universities in Germany

### Challenge

- 1999 – 2001: the translation from DAS to SAN environment
- 2003: storage virtualization
- 2009: better integration with the virtualized data center environment

### Solution

Infortrend RAID solutions (A16F-G2430 & S16F-G1430) met the following requirements:

- Reliability
- Affordability
- High capacity and easy expansion
- Easy to integrate in a virtualized environment
- Excellent price/performance and quality ratio

## Humboldt-Universität zu Berlin – from DAS to SAN environment, from 19TB to 1PB capacity, with Infortrend storage solutions

*“The great performance and reliability plus the ease of administration and the excellent price/ performance ratio tipped the scales to the Infortrend systems.”*

*~ Frank Sittel, IT admin of the Humboldt-Universität zu Berlin*

### Humboldt-Universität zu Berlin

One of the most well-known and largest universities in Germany, the Humboldt-Universität zu Berlin, was founded in 1810 according to the concept which Wilhelm von Humboldt had put forward “Humboldt-Universität was the mother of all modern universities.” It lives up to its history as a reform-orientated institution by planting innovative ideas into study, research and structure.

Today, 35,000 students are signed up in 242 courses of studies. 384 university professors are supporting the students with their intensive education. 60 employees are working in the IT Department, and 2 of them, Mr. Sittel and Mr. Doeblner are managing the SAN environment for the different faculties in the data center at the Campus Adlershof.

### 1999-2001 From DAS to SAN, the first contact with Infortrend

Server consolidation and the transition from DAS to SAN environments was a common trend in 1999/2000. Humboldt-Universität would like to get in on this trend for reducing the cost of buying new servers and decrease the payment for their maintenance. Furthermore, they would like to centralize the storage for better management and utilization.

Under the pressure of cost reduction, the SAN administrators have tried to find a storage product which is reliable, cost friendly and can increase capacity. By reviewing the storage solutions on the market, the suitable solution was found to be the “Infortrend’s EonStor RAID subsystems” - offering a high capacity alternative with good performance, a reasonable price, and could easily be connected with Chaparral SCSI to FC routers to build Fibre Channel SANs.



Humboldt-Universität  
Unter den Linden



Campus Adlershof



### The Virtualization Demands

Beginning in 2003, Humboldt-Universität began to virtualize its storage with FalconStor. The virtualization was based on two reasons; the first one was to simplify administration, and the second was for better storage utilization

In spring 2009, Humboldt-Universität started a new project. It awarded the tender to Infortrend's EonStor arrays because they are much easier to integrate in a virtualized FalconStor environment, they are able to change the WWPN number, and they have very good price/ performance and quality ratio.

### A Demanding IT Environment

Today, the building of all the faculties around the data center Campus Adlershof are all equipped with FC connectors, associated with the data center SAN. The SAN components are 4 DCX Brocade FC Director switches and 50 smaller Brocade departmental switches. The entire volume of FC ports is 1600. Some general facts about Humboldt-University IT environments:

- 46,000 accounts
- 9,800 workstations
- 51,000 mail addresses/ 130,000 mails per day (4 TB)
- 500 different web sites
- Hits on web servers 2.5- 3 million each day
- 210 databases on different servers
- Backup capacity 170 TB
- 130 sub network

### The Purchasing History and Capacity

- 2001 — 24 Infortrend RAID arrays were purchased/ the capacity was 19 TB in the beginning
- 2003 — 36 Infortrend RAID arrays were purchased / the total capacity is 54TB
- 2004 — 13 new Infortrend RAID arrays were purchased/ the total capacity is 85TB
- 2007 — RAID arrays upgraded and replaced to Infortrend EonStor A16F-G2430
- 2009 — 52 new Infortrend RAID arrays (A16F-G2430 x36 + S16F-G1430 x16) were purchased/ total capacity is 890TB now

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#### About Gontrolware GmbH, Berlin/ Dealer

Founded in 1980, Controlware today is a system integrator and service supplier with ca. They have 580 employees and a revenue of 100 million Euros. Business units are communication solutions, information security, IT management, and application delivery. The portfolio offers consultancy, planning and realisation.

With a basis of a service network, Controlware is able to support its customer with individual services onsite. Its clients are banks, Universities, R & D and administration offices. Controlware Subsidiary in Berlin supports the Humboldt-Universität since 1999 in storage projects, data security and infrastructure. Mr. Joerg Dubslaff is responsible for Humboldt University and keeps a very close contact to them.

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