

# Case Study

## Siemens AG GS IT

“Together with Fujitsu we have developed a solution for supplying SAP HANA systems to our customers in a standardized and automated manner, in a very short space of time. The cooperation with Fujitsu was excellent.”

Dr. Jürgen Droletz, Project Management, Siemens AG GS IT



### The customer

Country: Germany  
 Industry: Technology  
 Founded: 1847  
 Employees: More than 343,000 worldwide  
 Website: [www.siemens.de](http://www.siemens.de)



### The initial situation

All the SAP systems at Siemens' central data center were to be migrated to SAP HANA® and additional SAP HANA systems were to be provided. The key requirement for a joint project between Siemens and Fujitsu was the assurance to install the systems quickly and to a high standard in a fully automated manner.

### The project

To meet these requirements, the data center team at Siemens AG entered into a joint project with Fujitsu:

- The associated detailed technical requirements were worked out together
- A suitable infrastructure was developed to provide the hardware basis for the SAP HANA systems (HANA Power-Block)
- A solution for the automated provisioning of a storage infrastructure, including snapshot and clone technology, was designed and implemented

### The customer

Siemens AG (Berlin and Munich) is a global technology powerhouse. The company is active in more than 200 countries, focusing on the areas of electrification, automation and digitization. The central data center of Siemens AG is responsible for hosting and running the company's business-critical applications.

### The solution

The first phase of the project consisted of the following:

- Definition of requirements and solution design
- Target system definition
- SAP HANA® project solution architecture
- Definition of the hardware basis for the SAP HANA systems (HANA Power-Block)
- Implementation
- SAP HANA infrastructure setup.

In the course of this, it was found that a SAN-based infrastructure actually offers significant advantages over NAS systems. A proof of concept showed the ETERNUS DX storage system to be superior to all the other competitor products.

The second phase focused on implementation of ETERNUS Snapshot technology:

- To enable instant recovery of even the biggest databases at any time. (The biggest system installed at Siemens currently has a volume of 21 terabytes of compressed HANA data and, thanks to ETERNUS DX technology, can be backed up and restored in a matter of minutes. By comparison, this data would take several hours to recover using traditional back-up methods)
- To allow rapid and straightforward generation of system copies.

For this implementation, Fujitsu had to utilize its expertise as both an infrastructure provider and a solution developer.

### The customer benefit

- Rapid provisioning of SAP HANA® systems
- Low operating costs as a result of increased standardization of the SAP HANA systems and infrastructure with potential sources of error reduced to a minimum

### Products and services

- 50x FUJITSU Server PRIMERGY RX4770 3TB
- 4x FUJITSU PRIMEQUEST 2800B
- SUSE Linux Enterprise Server
- 3x FUJITSU Storage ETERNUS DX600 with 480 HDDs each of 900GB SED each (HANA production)
- 1x FUJITSU Storage ETERNUS DX200 as a HANA test system
- BROCADE SAN/LAN infrastructure
- Firewall systems
- Consulting services
- Design services

Dr. Jürgen Droletz, who managed the project for Siemens IT says: "Working with Fujitsu has been a great experience; we learnt a lot from one another." Both sides contributed their strengths. While the data center team focused on data center operations, the team from Fujitsu contributed their development expertise. In the course of the project, Fujitsu became the principal supplier for SAP HANA infrastructure.

The automation generated by the solution has changed the way the data center will work in the future. For automated installation, greater attention must be paid to planning data center reserves and capacities in order to ensure that new applications can be implemented at the touch of a button. As Jürgen Droletz explains, "Errors have to be detected much sooner.

"Prior consultation with the customer is extremely important when preparing for the automated deployment of SAP HANA systems. The actual requirements for an optimum solution have to be defined even more precisely. This is where our expertise comes in and automation cannot replace that."

Twelve SAP HANA systems have so far gone live, running 40 instances, each SAP HANA system typically consisting of at least one production system, one integration system and one development system.

### The customer benefit

There is high demand for HANA installations at the Siemens AG data center. Droletz explains, "Automated installation allows us to satisfy this demand without having to increase our IT staff." Standardized, high quality services can be provided quickly and easily. The advantage of automated installation is that similar things can be done in the same way. If an error does occur, it can be eliminated everywhere in the same manner. "We are also planning to automate installation of other services," continues Droletz. This will further optimize the quality of the services offered.

The advantages of automated installation were felt even before the project had been completed. As Droletz explains, "Insights were incorporated gradually during the course of the project; implementation was phased in while testing its effectiveness."

### Conclusion

The project succeeded in systematically developing the automated setup of SAP HANA installations (servers, storage, network, firewall) with integrated snapshot technology for backing up data on the basis of ETERNUS DX. The key to the success of this project was the smooth cooperation between the Siemens AG data center employees and the Fujitsu development team.

**The methodology developed during the project is now to be transferred to other areas.**

In collaboration with



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