Europe’s Cortal Consors Supports Ambitious Consumer Banking Initiative With Powerful Hitachi Storage Solutions

Formed by a merger of French company Cortal and German company Consors, Cortal Consors is a key player in the field of banking, financial services and brokerage and has acquired a reputation in particular with its securities business. Consors was the 1st bank in Germany to offer trading over WAP-enabled cell phones in addition to normal online business in 2000; and with the introduction of the “Hello bank!” campaign in 2013, Cortal Consors launched an expansion into consumer banking that was unprecedented in the company’s history. To implement this ambitious plan, Cortal Consors opted for Hitachi Data Systems storage solutions.

Challenge: Expansion Projects Bring New Data Dimensions

In Germany alone more than 700,000 customers currently use Cortal Consors’ services. Together with the other key markets in France and Spain, over 1.1 million people draw on the company’s banking and financial services. Since 2012, Cortal Consors has been a member of the BNP Paribas Group within retail banking; BNP Paribas is one of the leading commercial banks in France and one of the largest banks in Europe.

With the launch of Hello bank! Cortal Consors began transferring its in-house online expertise in investment matters to banking services and successfully developed into a full-service online bank. For example, by September 2013, the number of current accounts already exceeded 20,000. Yet, the financial service provider has not forgotten the significance of its brokerage and trading roots, as shown by the 6,418,968 trades that took place in 2012. All of this success, however, means growth, not only in sales, employees and customers, but also in information technology and data, the company’s most sensitive and important asset.

Christian Krug
Head of Department Engineering
Cortal Consors

“Financial data is some of the most sensitive information in the world. It is therefore all the more important that data is available but secure. To ensure that this is always the case, Cortal Consors uses Hitachi Data Systems [storage] for the in-house data center, including enterprise, midrange and Hitachi NAS Platform.”

Benefits at a Glance

■ Automatic storage assignment and optimization.
■ Ease of management.
■ Reduced floor space and energy consumption.
SUCCESS STORY

At the end of 2012, it was clear on an IT front that the systems then being used would no longer meet the requirements of a dynamic, growth-oriented environment in all respects: The storage systems in the data center in Nuremberg in particular were showing a bottleneck. At the time, the IT strategy provided a maximum 50% utilization of the systems during a switch to the 2nd Nuremberg location in the event of a system failure. An automatic failover was not feasible with that system.

The environment had other disadvantages as well. Migrations were complex: They could only be carried out in a host-based manner, which meant transferring data while it was in operation was difficult. A significant amount of time was also required to manage the data.

These challenges called for specific requirements in the new storage environment. Tiered storage was needed to automatically select the most appropriate storage location. As Cortal Consors develops a great deal of the banking software itself, the flexibility to support custom software was another mandate. In short, the objective was to employ a new architecture that ensured enough flexibility to meet the company's challenges with virtualization.

Solution: Scalable Design and Automation

As Cortal Consors began its search for a contemporary, innovative design for its storage environment, it determined that both the enterprise and midrange systems and the backup were affected. After analysis, the Cortal Consors’ project team and longstanding partner, Computacenter, began a fundamental review of the overall architecture. The new systems were to be created as precisely as possible for optimal use.

After the basic ideas and requirements were transferred into a new target design, the search began for a suitable storage provider. “In choosing our new storage systems we took a completely neutral and objective approach and did not limit ourselves to previous choices. Of course, we received an offer from our previous supplier, but also from Hitachi Data Systems, as well as another competitor,” explains Head of Department Engineering at Cortal Consors, Christian Krug. “It soon became clear that HDS offered the right products in its portfolio. The system’s capabilities were a decisive factor in awarding the contract.”

HDS demonstrated these capabilities at a meeting in Nuremberg in early January 2013. The project then progressed rapidly: In March 2013, Cortal Consors had ordered 2 Hitachi Virtual Storage Platform (VSP) systems as enterprise storage, 2 Hitachi Unified Storage 130 (HUS 130) systems, as well as 2 Hitachi NAS Platform (HNAS) models to create a high-availability cluster. The systems were delivered at the end of March.

In spite of the many and complex tasks of the storage systems, Cortal Consors, Computacenter and HDS were able to achieve a simple structure: The key elements are the 2 VSPs that accommodate all storage area networks except for backups. Each VSP is equipped with a total of 127TB of usable capacity. An expansion to 180TB without Cortal Consors being required to order more licenses was planned from the outset. The 2 HUS systems serve as backup, accordingly. In order to carry out this task, they require a net capacity of 57TB each. In addition, a total of 40TB HNAS capacity from the VSP cluster supplements the file services environment. This construct is kept deliberately simple, to make the environment as manageable as possible.

All of the modules of Hitachi Command Suite and the Hitachi High Availability Manager (HAM) software are responsible for managing the storage. With the server virtualization based on VMware, HAM, thanks to its clustering capabilities, is able to ensure a fail-safe environment, which is extremely important in the field of banking. For example, since almost the entire website presence of Cortal Consors accesses the storage environment, no online transactions would otherwise be possible. In addition to providing hardware and software, together with Computacenter, HDS also took over the commissioning of the systems. The Cortal Consors employees involved were also trained in the new systems before they went live. “The entire project management by Computacenter and Hitachi Data Systems was conducted in a very professional manner. I am completely satisfied with the cooperation,” confirms Helge Dürschke, project manager in the IT sector at Cortal Consors. The company carried out the test of the new infrastructure primarily on its in-house development environment, which is used by over 100 employees. Accordingly, the final “go live” was also
carried out there. The testing of Solaris systems and, finally, the databases followed this in-house testing.

Benefits: Ready for New Business

With the new storage infrastructure, Cortal Consors was not only able to achieve its main objective, more flexibility. It also took a big step forward in the field of automation. The installed Hitachi software is an important factor. Hitachi Command Suite allows the automatic assignment of data to the most appropriate storage layer. This capability works impressively well: It reduces the team’s workload considerably and generally makes better use of the environment, according to Dürschke. “Tiered storage has brought us huge savings,” he explains. “Before, we had to decide ourselves which data went where. With our old solution, it was not uncommon for servers with low I/O load to use a Tier 1 storage. The HDS solution now automatically optimizes this process for us, and is completely reliable. We have also established that with HNAS we no longer require Tier 1 and Tier 2, which saves us money. The failover mechanisms in the HNAS environment now operate automatically,” he says.

Another advantage of the new infrastructure is that maintenance is much easier. The 2nd-level support was relieved of many tasks; for example, Microsoft® Windows® administrators now take care of HNAS. And HDS Professional Services achieved a deep integration of Command Suite in the rights management of Cortal Consors.

In addition, the virtualization implemented as part of the redesign of the storage environment is the basis for the use of thin provisioning. On the previous system, Cortal Consors still had to physically reserve all of the allocated storage capacity from the beginning. The introduction of VSP as virtualization instance has improved the current situation: The entire storage environment is more efficient because less empty capacity is installed in the systems. Due to the use of HDS technology, the current productive systems only require 40% of the previously used resources compared to the old environment. For additional capacity, Cortal Consors can decide whether the extension includes additional performance, purely storage, or both. Further, by using HDS technology, all extensions and modifications to the systems can be carried out during ongoing operation without interruption.

In addition to the technology itself, the new infrastructure is also convincing in other areas, such as the floor space required and energy consumption. Of particular importance for Christian Krug is the significance Cortal Consors places on the IT environment. “I had a meeting with our CEO Kai Friedrich. When he asked why storage was important for the company, I could only tell him the truth: Without our storage system the whole bank would stand still,” explains Krug. “IT, therefore, clearly has strategic significance. All areas up to the order emergency system access VSP, HUS and HNAS. However, we have succeeded, together with Computacenter and Hitachi Data Systems, in replacing this central element in the course of the project. And we have made it sustainable without any restrictions in operation being noticeable. We are proud of this achievement.”

With a look at the long list of applications this statement is understandable: Consider the company’s websites, trading systems, customer relationship management, stock exchange links, complete payment transactions, and connected systems from France as well as Luxembourg and Spain. Cortal Consors would not be able to develop these tools and capabilities without VSP, HUS and HNAS.