Scality Storage-as-a-Service Solution

Host Europe GmbH (http://www.hosteurope.de) is a leading provider of web hosting and Internet services for residential and business customers in Germany, Austria and Switzerland. The company offers highly resilient infrastructure in the form of dedicated and shared scalable managed hosting solutions for demanding Internet applications. It operates fully recoverable green data centers that use 30% less energy than conventional design. Founded in 1997, it has over 200,000 corporate and private clients, making Host Europe the third-largest hosting provider in the German market.

Seeing the evolution of customer needs, Host Europe initiated a cloud storage project in the summer of 2009. The goal was to be able to offer a very cost effective storage solution to both new and existing customers, especially for backup purposes.

The deployment was intended to be a completely new service, which had to be integrated with existing provisioning, billing, operations and support tools.

The key requirements:

> Profitable operation given market pressure. As far as Cloud Storage goes, large players have established a standard price in the market at € 0,10 /GB/month for the first 50 TB. Host Europe may charge a premium, but essentially for the service to be profitable, the cost of operation needs to be significantly below € 0,10/GB/month.
> Highly scalable. At the beginning, for the launch of the service, it was necessary to build a relatively small, and inexpensive system, but as the service gains market acceptance, it is important that the storage can grow easily, and without any service interruption. Even at hundreds of TB or multiple PB, the system needs to remain extremely easy to operate, otherwise the service will not be profitable for Host Europe.
> Well-priced, but user friendly for end-users. At this point the primary usage for cloud storage is backup: Either backup of systems already hosted by Host Europe, or backup of systems which are located at the customer site.
> Since the system will be hosting storage for thousands of different customers, each with their own set of requirements, it is critical that it guarantees confidentiality of customer data.
> Easy to integrate with existing Host Europe tools. In particular, it has to track customer operations and storage to be able to bill appropriately.
> Data needs to be protected, even in the event of disk or complete server failure. Typically, people and corporations place data in cloud storage expecting to leave it there for over Five years. Therefore, the system must guarantee the reliability of the data for very long periods of time.

The selection process found Scality RING to be the best solution

During the fall of 2009, Host Europe invited four contenders to come on site and demonstrate products in a very complete trial in their labs. Tests included typical simulated use cases, as well as unrealistic workload designed to break the system. Host Europe especially tested the systems for very large numbers of small files, as well as gigantic file size. Every kind of failure, disk, server, power, network, was tested to make sure that no data would be lost under any circumstance. The Host Europe team also looked at the ease of integration with their existing provisioning and billing system. Several applications designed to back up data to the cloud were tested to check that they were compatible with the solution.

Scality was judged to be the best solution:

> Scality proved to be extremely scalable, able to deal with large number of files as well as very large files
> Scality never lost data when system failures occurred
> Scality was compatible with existing end-user software
> The relationship between the Host Europe testing team and Scality engineers was easy and productive
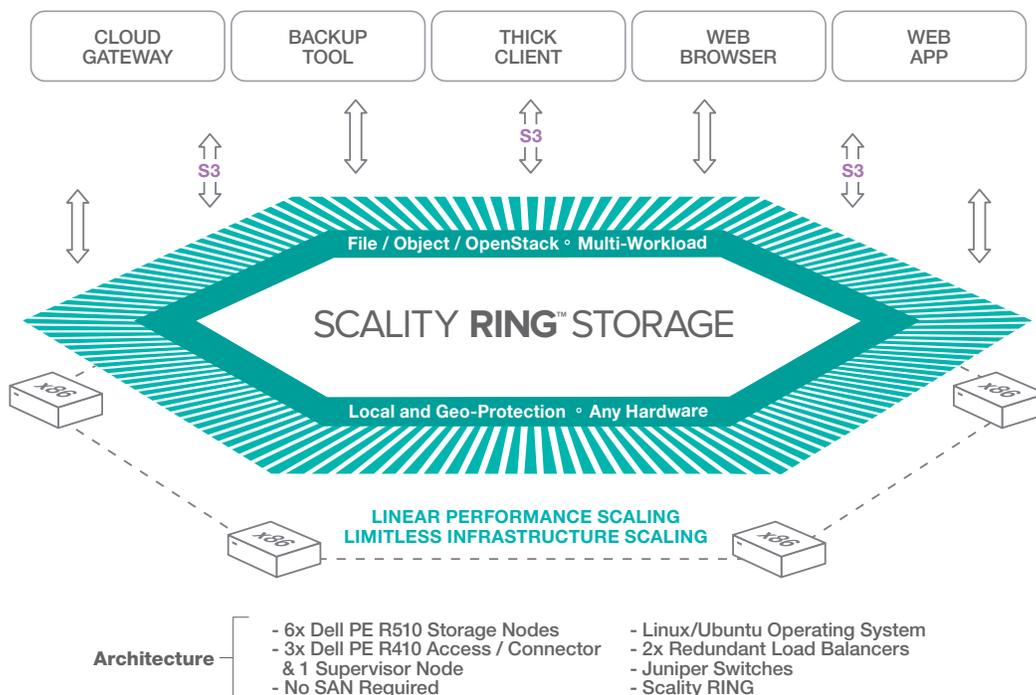
"We had good sessions when we worked together with Scality. As soon as we had broken the solutions, we had fixes there in the morning, so the collaboration was very fruitful." (Jan Behrens, Head of Product Development)

"Scality's support staff and processes ensure efficient and uncomplicated communications, making sure that things fall into place quickly." (Jan Behrens, Head of Product Development)

Selecting hardware

Host Europe has a long standing relationship with Dell, so naturally, the tests were performed on Dell servers. Once Scality was chosen, Host Europe wanted to make sure that it had the very best possible architecture. The relationship between the three parties proved to be excellent and resulted in a very fruitful collaboration.

"The relationship is very workable between all three parties. There are no conflicts. Each is providing what they need to provide." (Jan Behrens, Head of Product Development)

Architecture
- 6x Dell PE R510 Storage Nodes
- 3x Dell PE R410 Access / Connector & 1 Supervisor Node
- No SAN Required
- Linux/Ubuntu Operating System
- 2x Redundant Load Balancers
- Juniper Switches
- Scality RING

Results

Implementation took just three months, and the RING has now been running since January 2011. RING software delivers the extreme scalability which is required, and it also ensures that ongoing growth is easy to handle. Hardware refresh and scaling up are just a simple matter of adding and removing servers, with no risk of interrupting or impairing the customer's service. Host Europe has found the system easy to operate and to scale. Beyond the software itself, Scality has consistently met and exceeded the requirements for a productive working relationship. The RING cost structure guarantees Host Europe a profitable, growing business. The more they grow, the less the storage will cost.

"Scality's team is easily reachable and support has always been outstanding – and still is. Challenges are addressed immediately and the long-term collaboration is excellent."

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