Delivering a First-Class Cloud Experience

KEY HIGHLIGHTS

Industry
Web hosting provider

The Solution
- New 1&1 Cloud Server platform
- VMware vSphere, HP Blades, Cisco Nexus switches, and SolidFire storage
- SolidFire enables the sharing of multiple products in one platform without the "noisy neighbor" problems of traditional storage
- Thanks to SolidFire's API, 1&1 is able to integrate the platform fully into its management and orchestration environments

Benefits
- Guaranteed performance for all of 1&1's customers
- Reduced storage infrastructure complexity
- Improved flexibility and performance for all cloud customers
- Ability to easily scale-out storage infrastructure

As one of the world's leading internet service providers, serving consumer, business, and developer users, 1&1's award-winning products range from web hosting and domains to the provisioning of dedicated, virtual private and cloud servers, email, and e-commerce packages. It serves the UK, Germany, Austria, France, Spain, Poland, Italy, Mexico, Canada, and the United States.

1&1 aims to satisfy a clear need in the market: simplifying the use of technology and making the cloud fully dependable and accessible to small businesses, resellers, and enterprises. Recently, 1&1 introduced the new 1&1 Cloud Server, which allows customers from small and medium sized companies (SMB) to benefit from an easy-to-use, flexible, and high-performance product which combines high-quality enterprise features with the needs of SMBs.

How 1&1 did what's never been done

1&1 has renewed its cloud portfolio to create a new generation of cloud solutions. The main goal was to design a new cloud offering for SMBs to deliver enterprise-level flexibility and power within an easy-to-use product. Uniquely, 1&1 customers can easily create high performance cloud deployments and scale them up and down

based on their business needs without any prior training or additional investment. This allows companies, developers, and integrators to move their web projects and business applications to a flexible and high-performance cloud environment easily.

Best technology, less complexity

Storage is the foundation of any cloud solution. 1&1 was looking for a trusted storage partner and, after a thorough evaluation, realized the SolidFire storage platform would greatly simplify end-user cloud experiences, while simultaneously reducing internal complexity with its Quality of Service (QoS) and scale-out architecture. Each time 1&1 adds a storage node, it benefits from predictable performance and capacity gains. SolidFire's QoS guarantee has also allowed 1&1 to safeguard against "noisy neighbor" problems where a user could experience a performance lag because one application affects another's performance. With SolidFire, 1&1 can provide each application with the resources it requires without impacting the performance of other applications. This has meant 1&1's operations team no longer needs to constantly manage the storage infrastructure when particularly resource-intensive applications are deployed by a customer.

> "Our aim is to make the cloud easy – that's our promise to our customers. We take the complexity of building a cloud away from end-users, and focus on giving them a first-class cloud experience – low latency, maximum performance, and a simple pricing structure."

Javier Salcedo Gadea
Head of Product Management Cloud, 1&1

Javier Salcedo Gadea

What this means to 1&1 customers

1&1 Cloud Server customers have a tremendous amount of flexibility when it comes to choosing the type of cloud they need to support their business. "Compared to the 1,000 server configurations that could previously be delivered in 10 minutes, thanks to SolidFire's platform, 1&1 can now offer its customers two million server configurations delivered in 55 seconds, which is clearly a massive improvement for us and our users. And with state-of-the-art, solid-state storage, they never need to worry about performance, availability, or reliability," Javier said.

The Whole Story

1&1's cloud solution was originally built on a traditional storage architecture from a range of vendors. As part of this cloud offering, customers chose between performance tiers, with each tier having a different architecture and price point, rather than offering a single solution providing guaranteed performance. 1&1 aimed to reduce this complexity and found that traditional storage was no longer sufficient for the needs of demanding clients. While 1&1 was able to meet its customers' needs with this offering, it began to realise that the limitations of traditional storage could be holding it back. The primary concern was that these traditional storage arrays introduced complexity, both for customers and the operations team managing 1&1's internal infrastructure.

The main complexity for customers was the choice they had to make between performance tiers. Performance requirements often change during the lifetime of a project and traditional storage made changing between tiers a highly disruptive process. This introduced a layer of complexity that went against the overall aim of delivering simple-to-use cloud services. At the same time, 1&1 was also keen to give customers as much choice and flexibility as possible.

Internally it was also important for 1&1 to improve the management process for the support teams. The main issue was that in order to guarantee performance for end users, operations staff had to fine-tune storage performance whenever a particularly resource-hungry virtual machine was created. This meant they were constantly faced with the need to balance competing customer resource demands. "Always guaranteeing performance in

spite of 'noisy neighbors' presented us with a constant challenge. While it was easy enough for us to add storage nodes thanks to our SAN setup, adding more customers made the problem of juggling resource demands more complex," Javier explained.

The Solution

As 1&1 continued to grow, it became clear the company needed to look beyond traditional storage. It recognized all-flash, solid-state storage as the obvious choice to replace the existing cloud storage infrastructure. Once 1&1 identified all-flash storage as the next step for meeting the storage infrastructure needs, the team quickly narrowed down a list of vendors. Their primary consideration was to reduce the complexity of 1&1's storage infrastructure, both in terms of managing performance and offering customers a simplified and more flexible service.

After assessing a number of vendors, 1&1 chose SolidFire for its next generation storage platform. SolidFire was selected because it was the only storage technology that enables the company to simply control performance levels to each and every workload with zero disruption to customers. What's more, its in-line deduplication and compression technology would mean 1&1 could see significant cost benefits over other solutions.

Benefits of working with SolidFire

After thoroughly testing SolidFire's storage solution, and following a two-month beta phase, the advantages of SolidFire's all-flash arrays were clear. Not only did the SolidFire storage platform greatly simplify end-user cloud experiences, but it simultaneously reduced internal complexity — primarily thanks to SolidFire's scale-out architecture and built-in automation.

Future Plans

For an international company like 1&1, it is important to work with a storage vendor that is able to deliver its own global expertise, as well as one that supports it in delivering easy-to-use, powerful, and flexible cloud solutions to its customers. SolidFire will continue to be an important partner, thanks to its global reach. As a result of SolidFire's scalability, guaranteed performance, and reliability, 1&1 is now able to deliver the power and flexibility of an enterprise solution to SMBs with the simplicity that makes it accessible to even the smallest business.