Hewlett Packard Enterprise

Objective
Support a rapidly growing video archive with a simpler infrastructure flexible enough to handle multiple storage workloads

Approach
Deploy Scality RING and HPE ProLiant SL4540 Gen8 Servers to achieve petabyte-level scalability with maximum performance and efficiency

IT Matters
• Reduces transfer time for 40 GB movie from 60 – 70 minutes to 6.5 minutes, a tenfold improvement in transfer time

• Scales active video archive to 3.5 petabytes in 50% less space than previous solution

• Simplifies support with standard hardware design

Business Matters
• Assures delivery of the latest information for broadcasts by accommodating new input and content changes at the last minute

• Increases the amount of video content that can be moved to online outlets such as Amazon and Yahoo for online streaming within the same timeframe

• Ensures business continuance even the event of total site loss

RTL II shifts video archive into hyperscale with HPE and Scality

German TV station boosts transfer speeds tenfold with HPE Servers and Scality RING

With its active video archive growing 200 terabytes per year, German TV station RTL II needed a more efficient way to scale. By deploying HPE ProLiant SL4540 Gen8 Servers with Scality RING object storage software, the station gained petabyte-level scalability while accelerating video transfer speeds tenfold.

RTL II, is a major production and broadcast center, creating 200 terabytes of new material (movies and TV shows) every year. In 2013, RTL II achieved a market share of 6.8% percent among 14- to 49-year-old viewers, reaching the best years of market share since 2004.

To satisfy a growing audience, RTL II continually generates additional movie and TV programming resulting in video files that must be archived. However, the number of video files was growing so quickly that the TV station could no longer handle the volume in its previous SGI DMF archive. And with future 4K high-definition technologies overtaking today's HD systems, capacity requirements would become even more demanding.

Case study
RTL II

Industry
Media &
Entertainment

Page 2

> "Our ultimate goal is having one storage platform for everything. That's what Scality and the ProLiant SL4540 offer. They bring efficiency, performance, and virtually limitless scalability."

— Reinhard Görtner, Vice President IT and Services, RTL II

This unrelenting growth demanded a scalable active video archive solution to accommodate RTL II's current 2-petabyte video archive and handle future requirements for an ever-increasing number of video files. The TV station also wanted to simplify its overall infrastructure, which included storage from SGI, EMC, and NetApp. For this, RTL II turned to Hewlett Packard Enterprise (HPE) and Scality, a global HPE partner and leading provider of software-defined storage solutions.

Reinhard Görtner, RTL II's vice president IT and services, comments, "We view Scality as technology for the future. Their RING storage is exactly what we need for our petabyte-scale business. The question was then, which hardware platform should we choose? After looking at SGI and EMC, we found the HPE ProLiant SL4540 Server was the perfect fit for Scality and our existing HPE server infrastructure."

At the core of HPE petabyte-scale object storage platforms is the HPE ProLiant SL4500 Scalable System, which was matched to the specific performance and capacity needs of RTL II's unique application requirements. The HPE ProLiant SL4540 Gen8 Server proved the ideal choice for the active video archive as the first server purpose-built for big data. In fact, the ProLiant SL4540 provides up to 3.24 petabytes of storage in a single rack to efficiently and cost-effectively manage the largest object storage implementations.

Simplified scalability for rapidly growing video archive

RTL II deployed 18 ProLiant SL4540 Gen8 Servers with Scality RING running in a Red Hat Enterprise Linux operating environment. This powerful platform will now allow RTL II to scale its video archive beyond 3.5 petabytes in a footprint 50% smaller than SGI. The solution is also replicated in three data centers connected by a 10-gigabit network to ensure continuous availability in the event of a problem in one of the sites.

Unlike typical large-scale deployments that require many days of on-site assistance by the vendor, RTL2 was able to install the ProLiant SL4500 infrastructure on their own within 3 days. This proved to be critical as the TV station was on a very tight project timeline.

Hans-Josef Görtner, IT service manager at RTL II, notes, "The ProLiant SL4540 servers installed quickly and easily, which was essential for us to stay on track and avoid costly delays implementing Scality. In the end we were able to meet our desired end date."

Because HPE disk drives are standardized across the ProLiant server line, the ProLiant SL4540 is also very easy to support. For example, instead of calling the vendor to replace a drive as was needed with SGI, RTL II can now simply pull a drive from its spare parts shelf and replace it on their own.

Customer at a glance

About RTL II
RTL II has been on air since 1993 and consists of a team of 200 employees. The TV air-time marketer EL CARTEL MEDIA is a 100% subsidiary of the RTL II station and employs 40 permanent staff. RTL II means pure lust for life. As with all of its programs, the focus is on fun, entertainment and passion. Passionate documentary soaps present—up-close and direct—life as it really is, exclusive high-quality series and genuine movie highlights fascinate and delight the fans. Along with high-quality reports, documentaries and interesting scientific journals, RTL II addresses a broad target group. In addition, the station sets trends with its very successful and modern news concept, as well as with its great music events. A proven mix of reliable program brands and fresh format ideas distinguish the RTL II program.

Hardware
- HPE ProLiant SL4500 Scalable System
- HPE ProLiant SL4540 Gen8 Servers

Software
- Red Hat Enterprise Linux
- Scality RING

"One of our major goals with this new solution was to simplify our infrastructure," says Görtner. "An advantage of the ProLiant SL4540 is it uses the same hard disks as our other HPE servers. So a disk failure can be repaired in a few minutes using the spares we already have on hand instead of waiting a day or more for the vendor. That's extremely important in a time-sensitive business like ours."

Dramatically accelerated video transfer speeds

Today, all newly created high-resolution video content is stored on the HPE/Scality infrastructure, and existing high-resolution material is being moved from SGI onto the new platform. Over the next year, user data will also be added to the HPE/Scality solution.

With the combination of ProLiant SL4540 Servers, Scality RING, and a 10 GbE network, transfer speeds of high-resolution video from the archive to broadcasting systems have improved dramatically. In fact, a typical 40 GB movie that took 60 – 70 minutes to transfer using the previous archive now takes just 6.5 minutes. This has a huge impact on delivering the most up-to-date content possible.

For example, RTL II normally provides content from the archive 24 hours prior to the scheduled broadcast. However, sometimes changes are made to the content just two or three hours before broadcast. In the past, transfer time was too slow to accommodate these last-minute changes, but now RTL II can handle them with ease.

Görtner points out that faster transfer speeds are also important for delivering content to a growing number of online outlets. "We are seeing much greater demand for online versions of our programming than ever before," he says. "Higher throughput in our archive means we can provide more material to our customers in the same timeframe."

Eventually, RTL II anticipates consolidating all its storage onto the Scality/HPE solution, including databases, email, and business applications.

"Our ultimate goal is having one storage platform for everything," concludes Görtner. "That's what Scality and the ProLiant SL4540 offer. They bring efficiency and virtually limitless scalability."

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