RTL & Scality

Enterprise: Media and Entertainment

Scality RING ensures that rapidly expanding storage capacity is easy to handle. Because of the importance of VOD for Mediengruppe RTL Deutschland and the growing user audience for Mediengruppe RTL's VOD services, high read performance and a limitlessly scalable backend were must-haves so the company could meet demanding SLA metrics.

Availability & Reliability

Performance testing showed that, even at very large scale, Scality RING was able to maintain the necessary IOPS for customer needs.

Easy Scalability

Upgrades and add-ons are easy, with zero downtime.

Lower Operations Overhead

Ease of administration means low staff overhead.

As part of RTL Group, the leading European entertainment network, and as a subsidiary of Mediengruppe RTL Deutschland, RTL Interactive develops innovative themes, products and platforms that attract consumers as well as advertisers. RTL Interactive is responsible for the business units Online (including video-on-demand, IPTV, mobile and teletext), Licensing and Media Services (telephone

"The introduction of our RTL NOW app for iPhone and Android required that we expand our storage very quickly."

André Knegt, Head of Infrastructure at RTL Interactive

value-added services), and furthermore, for the subsidiaries Clipfish GmbH & Co. KG, the social network werkenntwen GmbH and the Smart Shopping and Saving GmbH.

In 2007, RTL Germany inaugurated its video-on-demand offering, RTL NOW, which today delivers more than 1.19 billion video views annually.

With a hundred million video views per month, Mediengruppe RTL Deutschland is experiencing tremendous growth in its VOD business and needed a way to scale beyond traditional storage solutions.

Four Factors

There are four main factors driving RTL Interactive's data growth:

1) The proliferation of viewing devices requires that each available video be encoded for a growing range of screen sizes and resolutions.

2) Increasing screen sizes and new high-definition TVs require better video quality and, therefore, rapidly increasing file sizes.

3) The VOD market needs to provide users with a growing catalog of new media to view.

4) A growing number of subscribers creates increasing amounts of user-specific data.

The Requirements

RTL needed to be able to scale storage for their VOD service easily, quickly, cost-effectively and reliably. Within 12 to 18 months, the storage solution is expected to be managing an estimated 22,000 movies and television series, and 16,000 hours of video.

Business Benefits

Scalability
Scality RING demonstrated extreme and easily managed scalability, successfully handling large numbers of files, including very large files.

Reliability
Scality RING never lost data when system failures occurred either at disc, server or network levels.

Compatibility
The fact that it just works—even through upgrades—means low staff overhead.

Performance
Performance testing showed that, even at very large scale, Scality RING was able to maintain the necessary IOPS for customer needs.

Lower TCO
Use of Scality RING in combination with chosen hardware vendors proved to be exceptionally cost-efficient.

In addition to these scalability requirements, other key requirements include:

- **Extraordinary performance:** With potentially hundreds of thousands of simultaneous views, RTL's VOD service and streaming servers require high read performance from the storage repository. Target bandwidth expected for the platform is: 4 Gbits/sec for Reads and 800 Mbits/sec for Writes.

- **Exceptional data resilience and disaster recovery provisions**: Viewers have very low tolerance for downtime, and in a highly competitive market, near perfect accessibility to VOD services needs to be assured.

- **Efficient handling of very large files**: The increasing market emphasis on high-resolution viewing necessitates a storage solution that can efficiently handle files of one GB or more without compromising performance or creating additional management overhead.

- **Multiple file access methods**: A variety of applications need to interface with storage, including Adobe Media Server, Apache Web Server, encoding appliances and web services for streaming. This requires diverse access methods such as FUSE, NFS and CDMI.

The Selection Process

RTL Interactive was introduced to Scality RING by its subsidiary company, the German social network wer-kennt-wen.de, which has been using Scality RING to store subscriber photos for more than two years. Werkenntwen's very positive experience with the RING was an important factor in the selection process.

Other RTL Group storage teams were also consulted with regard to their experience using EMC's Isilon and a variety of SAN offerings from HP, Dell and others. An on-site proof of concept (POC) was initiated in 2013 to test performance, data resilience and disaster recovery configurations, with particular emphasis on failover scenarios for disk or server failures, or for network interruptions.

With the assistance of Scality customer service engineers, the selection process and POC were undertaken by RTL Interactive's infrastructure team, led by André Knegt.

The Results of the Selection Process

As a result of the POC and the experience of the other storage teams in the RTL Group, Scality RING was determined to be the best-fit solution.

Scality RING demonstrated extreme and easily managed scalability, successfully handling large numbers of files, including very large files. "The RING gives us the ability to just add discs and servers to grow the capacity easily. This really impressed us," said André Knegt, Head of Infrastructure at RTL.

Scality RING never lost data when system failures occurred either at disc, server or network levels.

"Although object storage itself wasn't the goal for us, this technology offers us the scalability, reliability and performance that we need, as well as the ability to easily integrate storage into our existing infrastructure."

André Knegt, Head of Infrastructure at RTL Interactive

Scality RING was compatible with a range of existing applications.

Performance testing showed that, even at very large scale, Scality RING was able to maintain the necessary IOPS for customer needs.

Use of Scality RING in combination with chosen hardware vendors proved to be exceptionally cost-efficient.

Selecting Hardware

RTL Interactive has had a relationship with HP for more than 15 years. With the help of Scality's customer support engineers, RTL selected HP Proliant 380p Gen8 servers with 6 disks for the RING.

"Because of our long experience with HP Proliant Servers and the integration in our deployment and monitoring system, we chose HP," said Knegt.

The Architecture

- 8 HP Proliant 380p Gen8 servers

- One RING for production and another for backup

- ARC erasure coding to ensure resilience for large video files and replication for small files, such as images or small video files

- Sparse file technology to divide very large video files into parts that are stored on multiple nodes for added resilience
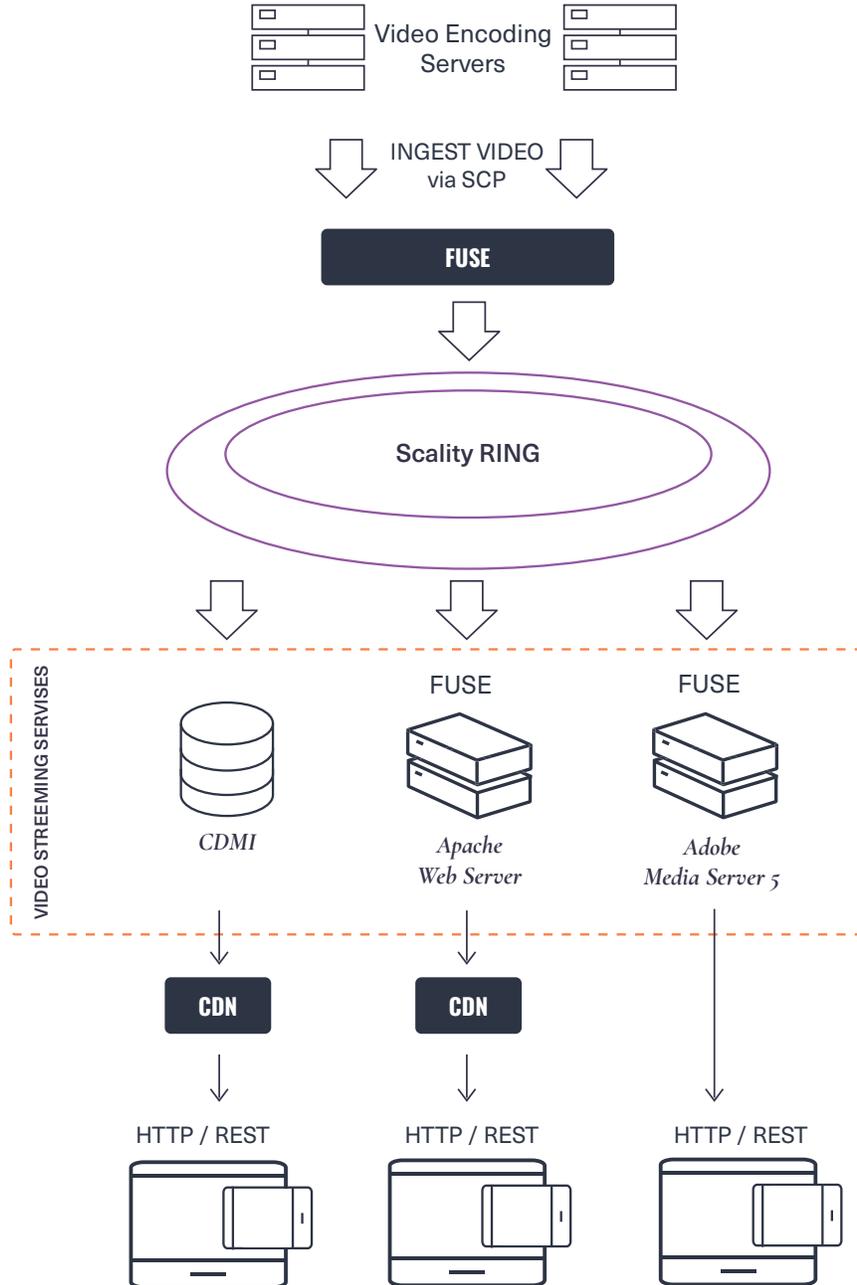
- Adobe Media Server access to data via the Scality SOFS FUSE connector

- Web services access to the RING using the Scality CDMI (HTTP/REST) connector

- Write access to the RING from video encoding applications via SCP

- The Linux/Ubuntu Operating System

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RTL INTERACTIVE NETWORK ARCHITECTURE

Video Encoding
Servers

INGEST VIDEO
via SCP

FUSE

Scality RING

VIDEO STREEMING SERVISES

FUSE   FUSE

CDMI

*Apache
Web Server*

*Adobe
Media Server 5*

CDN   **CDN**

HTTP / REST   HTTP / REST   HTTP / REST

Scality® storage propels companies to unify data management no matter where data lives — from edge to core to cloud. Our market-leading file and object storage software protects data on-premises and in hybrid and multi-cloud environments. With RING and ARTESCA, Scality's approach to managing data across the enterprise accelerates business insight for sound decision-making and maximum return on investment. To compete in a data-driven economy, IT leaders and application developers trust Scality to build sustainable, adaptable solutions. Scality is recognized as a leader by Gartner and IDC.

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