



KADOKAWA

CUSTOMER SUCCESS STORY

Kadokawa Connected & Scalality

Enterprise: Telecommunications

KADOKAWA Connected Inc. — an IT strategy subsidiary of Japanese media conglomerate KADOKAWA — was seeking a highly performant, stable, and scalable storage system for live-stream data from niconico Live, one of Japan's leading video-sharing platforms. Scalality delivers the ideal solution, plus cost savings.



Low TCO

KADOKAWA Connected is enjoying dramatic savings — a reduction of effort and cost equivalent to one full-time employee.



Stable Performance

This is the #1 concern for KADOKAWA Connected because access to data is critical, even under heavy loads.



Scalability

With success comes growth. Storage has to scale without downtime because availability is paramount.

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An IT strategy subsidiary of Japanese media conglomerate KADOKAWA, KADOKAWA Connected Inc. is a group of engineers that has streamlined the design, operation and management of KADOKAWA Group's information systems and service infrastructure, thereby reducing costs and achieving digital transformation (DX). The group also offers ICT consulting and DX advisory services to external companies, supporting remote work and reform of working practices.

In October 2019, KADOKAWA Connected — in collaboration with leading solution integrator BroadBand Tower (BBT) —

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Takumi Tsujishita, KCS' Server & DataStore Division

deployed software-defined storage (SDS) Scality RING as their storage system for live-stream data from niconico Live, one of Japan's largest video-sharing platforms.

Background

Looking to transition to a new storage system that offers the same performance under heavy loads

KADOKAWA Connected was using vendor's appliances and IA server-based SDS, which was developed in-house in dual configuration for the video content delivery storage infrastructure of niconico Live.

"Because video streaming is the core function of niconico, in terms of fault tolerance, it is quite risky to depend on a single storage system. For this reason, we have two storage systems in order to provide data redundancy at the storage system level," explains Toshiya Kato, head of KCS and KCS Server & DataStore division at KADOKAWA Connected, Inc.

Of the two storage systems, the one that needed to be replaced was the vendor's appliances. According to Mr. Kato, reasons for the replacement included the appliances not being scale-out types, instances of low performance with increased

storage capacity, and a significant number of labor hours spent at the time of failures, which also meant that its operational costs remained high.

"For example, we were once told by the vendor of the previous product that the system needed to stop running for 48 hours for repair after a metadata failure with the storage system. The failed storage was temporarily taken out of the service to be repaired, so it did not affect the niconico Live service itself, but we had quite a bit of work to deal with the situation. We were looking for a solution for challenges like this," said Mr. Kato.

Business Benefits

Cost Savings

Deploying the storage system with Scality RING slashed the man-hours spent on operation and maintenance, essentially saving the cost and effort of one full-time employee.

Stable Performance

With the government declaring a state of emergency due to the COVID-19 pandemic and more people at home, requests for time-shifted video feeds during peak hours reached levels 6 to 7 times higher than normal. Scality RING alone was sufficient to cope with the increased demand.

Ongoing Support

Support provided by Japanese staff, in Japanese and local time, and Scality RING's seamless integration into KADOKAWA Connected's monitoring system were great advantages.

Software defined solution

Scality RING brought a modern storage solution to KADOKAWA Connected — one that keeps content available to niconico Live users and offers high stability and scalability at a low cost.

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For their new storage system, KADOKAWA Connected chose software-defined storage Scality RING to create a scale-out storage system using multipurpose IA servers.

Considerations & Deployment

High stability, flexibility, cost advantage and a proven track record among the reasons for selecting Scality RING

There were three main requirements KADOKAWA Connected had for their new storage system: first, stable performance; second, an overall cost reduction, including product prices and maintenance costs; and third, high availability and scalability.

“In addition to concerns over performance, the previous vendor’s storage system had issues rooted in the operational phase. Only engineers very familiar with the system were able to get the manufacturer’s support, which resulted in us having to depend on one dedicated engineer for operation. I was really hoping to eliminate dependency on certain individuals like this,” said Mr. Kato.

After considering several storage products, KADOKAWA Connected ultimately decided to deploy Scality RING. Mr. Kato describes the reasons behind their decision:

“I am getting into technical details, but I found out that Scality RING (sproxyd connector) does not provide an API (List API) that retrieves a list of objects. This API is helpful in terms of user-friendliness, but I believed that eliminating this would ensure high stability and

scalability. The storage system that was to be replaced was used exclusively by a specific system rather than by multiple systems. We decided to prioritize performance and stability in the access patterns of the system. The design concept of Scality RING also matched our requirements. For the actual operation, we supplemented it by separately developing meta DB corresponding to the applicable functions. We were very pleased to have been able to develop it in-house with a design that was in line with our use cases and access patterns.”

Also supporting the decision was the fact that the cost of deployment was lower than that of competitors’ products, and Scality already had a track record in providing video streaming services for other companies.

In addition, support provided by Japanese staff, in Japanese and local time, and Scality RING’s seamless integration into KADOKAWA Connected’s monitoring system were great advantages to working with Scality.

“Scality RING allows us to install monitoring agents in the nodes, providing flexibility for logging into monitoring tools, metrics capture, system monitoring by SNMP and more. For operational efficiency, this is a significant advantage,” said Takumi Tsujishita from KCS’ Server & DataStore division.

Results

6 to 7 times the past peak video streaming handled and the cost of one full employee saved

Solution Components

Software-Defined Storage

- Scality RING with object storage interfaces (sproxyd)

Hardware

- A proprietary configuration of storage-dense standard x86 servers

Software

- In-house developed video streaming application

KADOKAWA Connected launched the Scality RING storage system in October 2019. Specifically, the system is configured as one cluster of nine IA servers and secures a physical storage capacity of 1.6PB with effective capacity of 1PB.

Looking back at the last ten months since the launch, Mr. Kato describes the business benefits of Scality RING:

“It allowed us to flexibly handle increasing demand for streaming. For example, since February this year, demand for streaming has been increasing dramatically due to the effect of the novel coronavirus outbreak. Demand continued to escalate during Golden Week (consecutive national holidays in April and May), in particular, because many people stayed home due to the government declaring a state of emergency. On top of this, niconico

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hosted an “Online Homecoming” event around the same time. As a result, requests for time-shifted video feeds during peak hours were six to seven times higher than during normal nights. However, the Scality RING system alone was sufficient to cope with this. No requests were passed on to our in-house SDS, which is a standby system in the event of unacceptable delays.”

Mr. Tsujishita describes the operational and cost aspects: “Deploying the storage system with Scality RING slashed the man-hours spent on operation and maintenance. The cluster configuration allows us to carry out maintenance by node, so we can work flexibly with our service staying online. What used to require the operational power of one person-month per month has now been reduced to less than one person-day. It can be likened to a reduction of effort and cost of one full employee, which is truly a dramatic cost saving.”

Going Forward

Sequential validation of other

systems’ transitioning to Scality RING

For the deployment of Scality RING, Mr. Kato remembers how reassured he felt with the support from BroadBand Tower and Scality Japan: “During the proposal stage, we shared our storage system load status at the time with the BroadBand Tower and Scality Japan teams. They came back with a quote and technical details, such as the hard disc speed and hardware configuration that would be required for the system design, presented with their calculations. I could infer from this that the teams have worked on numerous projects.”

After product deployment, Scality Japan provided on-site training that even went into internal structures, 6 hours a day for 3 days, which helped the KADOKAWA engineers dramatically increase their level of technical knowledge about Scality RING.

“By receiving the training, I felt greatly at ease about operating Scality RING by ourselves. During the test

operation, we received detailed answers to our questions about fine operation and instructions on what actions to take. Our worries were eliminated one by one. I felt certain that we would be able to operate the system with peace of mind,” said Mr. Tsujishita.

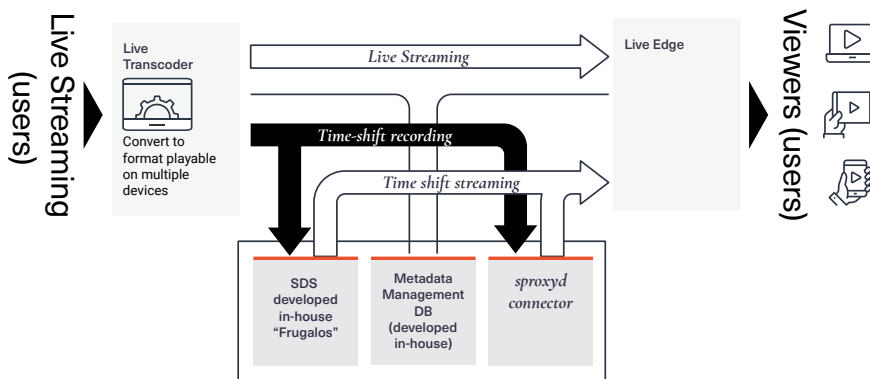
KADOKAWA Connected plans to sequentially validate whether other storage systems at the company can be transitioned to Scality RING.

“We would like to have BroadBand Tower and Scality Japan continue the validation process with us to determine whether use cases can be further expanded. We will also be actively taking part in the Scality user community,” said Mr. Kato.

Scality RING will continue to play an increasingly important role as a foundation that supports KADOKAWA Group’s growth. Mr. Kato concluded, “By going with Scality RING, we managed to build a storage system with high stability and scalability at a low cost.”

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.

System Configuration



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