



Case Study

Exos Systems Help Kyoraku Sangyo Push Peak Pachinko Potential

Seagate Exos storage systems provide future-proof capacity, performance, and cost efficiency.



- Future-proofed scalability
- Consolidated data access
- Reduced IT costs

Seeking a data storage solution that could handle the ever-increasing production and management of large, proprietary video files the company uses in its pachinko machines, Kyoraku Sangyo deployed Seagate Exos E and Exos X storage systems, enabling them to meet today's huge capacity needs and support future scalability.





Their Story

A leader in the Japanese entertainment industry.

Kyoraku Sangyo, headquartered in Nagoya, Japan, develops, manufactures, and distributes pachinko and pachislot machines. Their machines are highly appealing to players and feature complex, fast-moving digital video that spotlights popular intellectual property like “Hissatsushin Workman,” “Ultraman,” and “Masked Rider.”

Their Goal

Centralizing and future-proofing capacity and scalability.

As advances in their technology and content continued to amplify data creation and utilization, Kyoraku Sangyo sought a data storage solution that would meet near-term data demands, scale up as needed, and house all data in one location.





Their Challenge

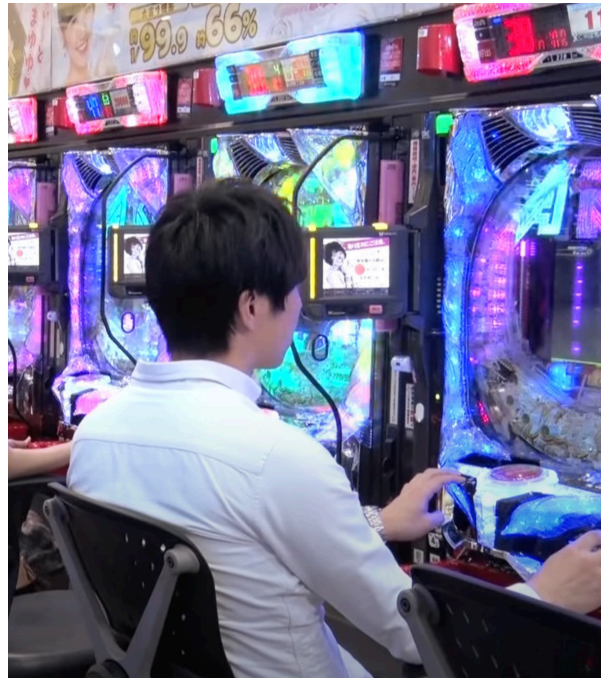
Fast-rising data storage needs.

Due to the high data requirements of their video assets, Kyoraku Sangyo faced an ongoing challenge around data storage.

The company's IT Strategy Department handles an enormous amount of data from their development staff, manufacturing details, the pachinko machines themselves, and production images, all of which demand hefty data storage capacity. With the animated videos assets used in the machines becoming increasingly sophisticated, the company has faced mounting challenges around data storage capacity requirements.

Not long ago, the company's annual increase in storage capacity measured about 100TB. The IT staff considered that quite a large amount, so they were surprised when annual data growth then accelerated to 200TB, and again when growth jumped above 300TB last year.

The IT team had to implement workarounds to keep needed capacity available, and the situation was like a dam about to burst. A better, longer-term solution was needed.





Their Solution

Reducing a three-phase process to one solution.

Kyoraku Sangyo realized they needed to simplify their architecture to enable them to keep more data live and accessible. Previously, to manage data growth while maintaining legacy data, the IT team had set up a complex three-stage storage process.

Frequently used data, such as that generated during active projects, was housed on a costly server. Once a project was completed, its data was moved to read-only, slightly less expensive, large-capacity storage. Data not frequently accessed was sent to linear tape open (LTO) storage, with a lower per-GB unit price, to protect it from being completely lost.

The company was essentially using their LTO tapes as a recycling bin, deleting data from their live systems after moving it to the tapes. But inevitably, the IT Strategy Department would often receive a request to retrieve LTO-stored data. The IT staff would see the desired items indexed, go to access the data, and would be met with a message to insert the LTO tape itself—it's a physical process that takes time.

In addition to capacity and access speed, Kyoraku Sangyo considers security as a top data storage priority. Their data sets had become so large that they previously had no choice but to place some data stores outside the company, and while they ensured their external data service provided full data security, this meant the data on the internal network was separate from that on the external network.

The company needed a better solution to consolidate all data, meet ongoing and growing capacity demands, and maintain all data securely inside the company where access rights are firmly restricted.

The IT team wanted to develop a file server architecture that looked to the user like a single unit but that would be highly expandable. The company started by searching for a NAS-based file server, and soon began speaking with Seagate.

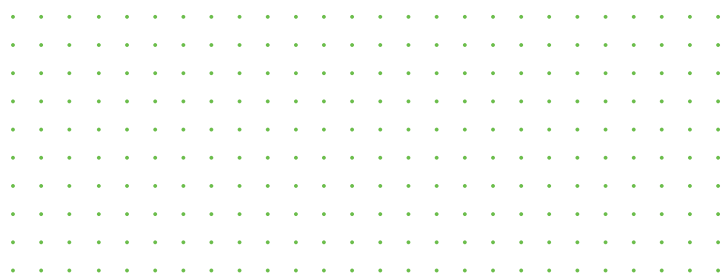


Within a month, Kyoraku Sangyo was working with Seagate to install a simple setup combining the Exos X 5U84 petabyte-scale, rack-mounted block storage system and the Exos E 5U84 Expansion JBOD. The two solutions are configured together to act as a file server accessed by users via Server Message Block (SMB), a network protocol that lets users access files on remote servers as if they were local files.

Seagate's Exos X 5U84 is a value-rich solution for applications that require massive capacity, high performance, low latency, and dual-controller availability; its advanced features include self-healing storage, data protection options, and a full enterprise software stack offering virtual pools, thin provisioning, SSD caching, encryption, auto-tiering, snapshots, and asynchronous replication. Exos E 5U84 is the datasphere's high-capacity, high-performance platform that can handle extreme data growth; it offers a great way to optimize data storage costs.

Easily meeting the company's minimum read/write speed requirements, the system exceeded 4 Gbps in benchmark tests. Depending on conditions, the configuration can remain operational even if three drives fail. The RAID controller and power supply are redundant.

The team's IT support became simpler and less expensive. The solution provides a high-density rackmount enclosure that is easily managed in the field with features such as the unique drawer design allowing easy access to drives and is easily maintained by one person. The IT Strategy Department estimated the system, as built, can help them reduce costs by 30 percent.



Their Success

Capacity, scalability, consolidation, and simplicity for the win.

Seagate's solution offers Kyoraku Sangyo future-proofed capacity and scalability. Storage was consolidated to improve access to all data.

Beyond addressing immediate storage demands, the initial installed capacity was two petabytes, providing sufficient capacity for at least five years. The footprint is small—just a portion of one rack—so there is room for storage expansion as needed. With room for 200 more units on the dedicated racks, further expansion can be easily accomplished.

Kyoraku Sangyo considers the solution a simple, elegant configuration geared towards low cost-per-gigabyte and high scalability, convenience, and functionality. They appreciate Seagate's efficient cost for large capacity, which makes it possible to store all data on disk and simplifies operations.

"In terms of hardware, petabyte-class storage is usually very heavy and requires a four-person team for maintenance," said Shunsuke Kawatoko, Kyoraku Sangyo's general manager of IT Strategy. "But this solution provides a simple pull-out drawer configuration, so it can be easily maintained by one person. Our IT team can maintain it like a normal 1U or 2U server without fussing every time something happens."



“

“The Seagate storage solution best fits our requirements, and my anxiety about the future has been resolved.”

SHUNSUKE KAWATOKO, GENERAL MANAGER OF IT STRATEGY, KYORAKU SANGYO HOLDINGS



Products Used

Exos X 5U84

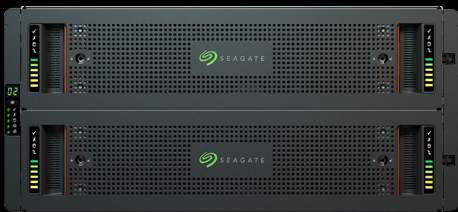


Seagate Exos X 5U84 Front



Seagate Exos X 5U84 Rear

Exos E 5U84



Seagate Exos E 5U84 Front



Seagate Exos E 5U84 Rear



Ready to
Learn More?

Our storage specialists are here to help you find the right solution for your data challenges.

Talk to an expert.

seagate.com

© 2023 Seagate Technology LLC. All rights reserved. Seagate, Seagate Technology, and the Spiral logo are registered trademarks of Seagate Technology LLC in the United States and/or other countries. Exos is either a trademark or registered trademark of Seagate Technology LLC or one of its affiliated companies in the United States and/or other countries. All other trademarks or registered trademarks are the property of their respective owners. When referring to drive capacity, one gigabyte, or GB, equals one billion bytes and one terabyte, or TB, equals one trillion bytes. Your computer's operating system may use a different standard of measurement and report a lower capacity. In addition, some of the listed capacity is used for formatting and other functions, and thus will not be available for data storage. Actual data rates may vary depending on operating environment and other factors, such as chosen interface and disk capacity. Seagate reserves the right to change, without notice, product offerings or specifications. SC24.1-2305US



SEAGATE