

# Powering advertising technology at scale to drive corporate expansion.

How **Supership** used Lenovo ThinkSystem SR635, powered by 2nd Gen AMD EPYC™ processors, to triple server density and support the growth of its advertising technology business.

Lenovo Infrastructure Solutions  
for The Data-Centered

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## Background

Supership is a marketing technology and data technology company based in Tokyo, Japan. Established in 2007, the company employs more than 350 people. Supership specializes in co-creation with its customers, working together to harness technology to deliver new value.

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## Challenge

Supership's corporate vision focuses on creating a happy 'Future Reality' (Mirai Riaru) by harnessing the power of digital technology. As a technology company, it has developed its business along two key axes: advertising technology (AdTech) and data technology services. As its ventures have expanded, Supership has integrated various companies, and now provides a comprehensive range of AdTech services via its Scale Out demand-side platform, Ad Generation supply-side platform, and DMP data management platform.

Mr. Ryo Wada, Infrastructure Engineer in the Ad Platform business area at Supership, describes the company's IT landscape: "As we build our systems, our main focus is on how quickly we can handle a large number of requests. In the AdTech area, we run approximately 3,000 storage systems, network devices, and servers, including both bare-metal servers and virtual machines running on OpenStack and Kubernetes as a container platform. Our key goal is finding new ways to consolidate servers and reduce operational costs and workload in the data center. So, when we select equipment, we put an emphasis on price-performance and operability."

## Why Lenovo and AMD? Reliability and price-performance.

Supership realized that it could further improve cost efficiency and reliability by replacing its aging servers with Lenovo ThinkSystem SR635 servers powered by with 2nd Gen AMD EPYC™ processors. These processors take advantage of a miniaturized 7 nanometer manufacturing process which can pack in twice as many cores as the previous generation—up to a maximum of 64 cores and 128 threads. This helps greatly improve I/O and memory bus performance and is designed to reduce power consumption, while a dedicated security chip helps keep data safe from internal and external threats.

When the 2nd Gen AMD EPYC™ processors were announced, Supership began to specifically consider adopting this technology in its own data center. Mr. Wada recalls: “I was interested in the fact that it is a processor suitable for virtual environments. Since it has a large number of cores and low power consumption, it is possible to use virtualization to build a highly intensive environment and expect significant cost reduction.

“At the time of the announcement, it was explained that we could get twice the number of cores compared to the previous-generation processor, without much of an increase in power consumption. We evaluated AMD EPYC™-based hardware from various vendors and decided to adopt the Lenovo ThinkSystem SR635 server powered by AMD, which had overwhelmingly superior price-performance.”

Mr. Takayuki Komaki, who also works in the Ad Platform business area at Supership, explains the reasons why the Lenovo ThinkSystem SR635 powered by AMD scored so highly in Supership’s evaluation: “When selecting a server, you need to consider not only functional requirements such as CPU clock speed, disk and memory capacity, but also the cost, power consumption, and ease of operation and support in a real-world environment. Lenovo’s ThinkSystem SR635 servers powered by AMD met all our requirements and offered excellent price-performance. Lenovo is also known for its high reliability and low failure rate, and easy-to-use management software, such as Lenovo XClarity. Based on all these factors, we recognized that we could significantly reduce the total cost of operation for our servers.”

## Increasing performance with 3x fewer servers.

Supership began introducing the new Lenovo servers powered by AMD, starting with the development and test environments that it uses to develop its AdTech services. The Supership team migrated approximately 500 virtual servers, which had been running on around 50 physical hosts, to just 16 Lenovo ThinkSystem SR635 servers.

Mr. Wada explains the impact of introducing the new systems: “Prior to this project, we were using older processors, and we allocated our workloads to about 1,500 virtual CPU cores across our 50 servers. After the replacement, we reduced the number of servers to 16 while increasing the number of cores to about 2,300. By tripling the density of virtual servers, we can greatly reduce the physical space required, and increase the number of cores we can allocate by 30%. Moreover, in our development environment, CPU performance limitations were more pronounced than memory and storage limitations—so moving to these latest-generation AMD EPYC™ processors has also improved overall system performance.”

In addition, by reducing power consumption, the Lenovo ThinkSystem SR635 servers powered by AMD have helped to save space in the company’s data center and reduce operating costs. Supership has also confirmed the positive effects of Lenovo’s speed of delivery and low failure rate.

Mr. Komaki says: “Surprisingly, despite all the logistical turmoil caused by the COVID-19 pandemic, we were able to install the Lenovo ThinkSystem SR635 servers powered by AMD within just two weeks after placing the order. That’s an overwhelming success, as it often takes more than a month to install a typical server. Lenovo gave us a real sense of speed. Rapid implementation is especially valuable in a scale-out architecture like ours, where we enhance performance by adding more servers. And it’s not just about fast delivery: in order to expand our systems quickly, we need to be sure that new servers will be free from defects and failures. Lenovo ThinkSystem servers are very reliable, so we were able to plan with confidence.”

In terms of operation management, Supership was impressed by Lenovo XClarity’s hardware fault monitoring and automatic notification functions. In the unlikely event of a hardware failure, the software will automatically raise an alert and report it to Lenovo, enabling speedy resolution of any problems.

Mr. Komaki says: “The automatic reporting feature is a great help in improving operational efficiency. While these features are available from other companies, Lenovo XClarity has a browser-based interface and is integrated with a variety of hardware management tools, so it’s very easy to manage. I think it will help us centrally manage our distributed data centers as our server landscape grows in the future.”

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## Results

Following the success of the deployment in Supership's AdTech development and test environments, the company now plans to implement Lenovo ThinkSystem technology powered by AMD in production, as well as expanding to support systems for other business areas.

Mr. Wada comments: "As our next initiative, we are eager to upgrade the servers in our Hadoop cluster and our virtual storage environment. The large number of cores and low power consumption characteristics of AMD EPYC™ are ideal for Hadoop and storage use cases."

The business environment in which Supership's AdTech business operates is changing dramatically. Advertising spend is shifting from mass media to the internet, the number of requests is increasing due to 5G networks and increased demand for video content, and restrictions on the use of marketing cookies is driving the development of new methods of targeting consumers.

Mr. Wada explains how Lenovo and AMD technology is helping Supership respond to this dynamic environment: "Supership has now installed servers in the Tokyo metropolitan area to support services that can handle high traffic with low latency. Increasingly, we're focusing on ensuring performance by running applications in parallel using virtual environments and containers. We will continue to strive to increase the hardware and improve the consolidation rate."



**3x increase in server consolidation rate**



**30% increase in virtual CPU availability**



**2x increase in cores and threads per CPU**

<sup>1</sup> All performance and cost savings claims are provided by Supership.



“The Lenovo ThinkSystem server platform, powered by AMD, will support Supership's future business growth.”

**Mr. Ryo Wada**

Infrastructure Engineer, AdTech business area, Supership

## What will you do with Lenovo smarter infrastructure solutions?

The Data-Centered drive business growth at scale and speed with Lenovo smarter infrastructure solutions, powered by AMD.

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