

Providing excellent patient care in a new, state-of-the-art hospital.

How **Makita General Hospital** used a hyperconverged infrastructure based on Lenovo ThinkAgile HX Series servers equipped with 2nd Gen Intel® Xeon® Scalable processors and Nutanix software to support its electronic medical records system—offering clinicians faster access to patient data via high-performance Lenovo ThinkPad E15 laptops with Intel® Core™ processors.

Lenovo Infrastructure Solutions
for The Data-Centered



Lenovo



Background

Founded in 1945, Makita General Hospital provides a wide range of care services to citizens in Ōta City, Tokyo. The hospital has 26 departments, specializing in disciplines such as neurology, ophthalmology, general surgery, psychiatry, and more. Every day, Makita General Hospital treats approximately 800 outpatients and has a capacity of 290 beds for inpatient services.

To care for more patients, Makita General Hospital recently relocated its main operations to a brand-new facility in the Kamata district of Ōta City. Committed to providing a friendly and supportive care environment, the hospital's new building offers cutting-edge medical facilities, and extra amenities including a fitness center and café.

2

Challenge

In addition to increasing patient capacity, Makita General Hospital aimed to seize the opportunity to enhance the patient experience. The organization knew that giving clinicians fast access to patient data would be a powerful way to minimize waiting times in the new facility and streamline the healthcare journey.

Makita General Hospital's doctors, nurses, and healthcare professionals rely on an electronic medical records (EMR) system to record and retrieve patient data. In the past, the organization hosted this and other mission-critical healthcare applications on a traditional three-tier IT infrastructure.

Behind the scenes, managing the underlying server and storage systems was time-consuming, expensive, and required specialist IT personnel to attend on site for maintenance. On the hospital floor, clinicians used laptops to access the EMR application—but extended boot-up times led to delays in accessing information. As it prepared to move to the new healthcare facility, Makita General Hospital decided to refresh its IT environment from end-to-end.



“We wanted to seize every opportunity created by moving to a new location to improve our services—and establishing a future-ready, cost-effective IT infrastructure to support our operations was a top priority.”

Mr. Yoshinori Arai
Chairman, Makita General Hospital

Why Lenovo? Flexible, reliable, powerful.

To simplify IT system management, reduce costs, and create the flexibility to spin up new digital healthcare solutions, Makita General Hospital replaced its traditional three-tier architecture with a hyperconverged infrastructure (HCI) based on Lenovo ThinkAgile HX Series appliances, powered by 2nd Gen Intel® Xeon® Scalable processors and pre-integrated with Nutanix virtualization and HCI management software.

Mr. Masayuki Hata, Deputy Director of the System Management Department at Makita General Hospital, explains: “Compared to three-tier architectures, the Lenovo and Nutanix HCI solution offers a much more cost-effective platform—one that can be easily scaled to meet our future requirements without the need for expensive five-year hardware refresh cycles. Because the Lenovo solutions are equipped with 2nd Gen Intel® Xeon® Scalable processors, we felt confident we would achieve superior performance for our EMR system.”

Makita General Hospital also deployed ThinkPad E15 laptops with Intel® Core™ processors for hospital personnel. Mr. Yoshinori Arai, Chairman at Makita General Hospital, comments: “Before, it would take up to five minutes to boot our laptops and open the EMR system. When testing Lenovo ThinkPads, we discovered that we could load the same system in a matter of seconds. Lenovo laptops were the clear choice, because we could see that they would help our healthcare staff to work more effectively.”



“Knowing that Lenovo has a long track record of helping leading medical institutions transform their operations gave us added confidence that Lenovo solutions were the perfect fit for our needs.”

Mr. Yoshinori Arai
Chairman, Makita General Hospital

Expert-lead deployment.

Makita General Hospital enlisted the help of Lenovo Services to implement the new HCI cluster and migrate its core EMR system to the new platform.

“The Lenovo Services team was instrumental in helping us to achieve a rapid and smooth deployment,” comments Mr. Masayuki Hata. “The COVID-19 pandemic hit right in the middle of the project, and we had to adjust our implementation strategy on the fly. The Lenovo team was always happy to adapt to our plans so we could meet our targets. What’s more, Lenovo Services helped us to identify and fix an unexpected issue with our EMR system that could have potentially caused significant delays to the implementation.”

Based on the success of the EMR system migration project, Makita General Hospital plans to continue working with Lenovo Services as it relocates other departmental IT systems to the new hospital building.



“Working with the Lenovo team on the deployment was truly a pleasure. Lenovo went the extra mile to ensure that our needs were met and help us to hit our go-live targets.”

Mr. Masayuki Hata

Deputy Director of the System Management Department, Makita General Hospital

3

Results

By moving to the Lenovo and Nutanix HCI solution, Makita General Hospital has greatly reduced its IT infrastructure costs while streamlining services for patients.

“The Lenovo ThinkAgile HX Series cluster takes up 75% less space¹ in our data center than our previous three-tier infrastructure,” explains Mr. Masayuki Hata. “Ultimately, this translates into much lower energy consumption and reduced cooling costs, and also improves the environmental sustainability of our core IT systems. Most importantly, our clinical staff can now access patient data faster, helping us to improve the patient experience.”

Using Nutanix Prism, Makita General can orchestrate compute, storage, and networking resources via a single point of control, dramatically simplifying infrastructure management. IT teams no longer need to be on site to carry out maintenance tasks; instead, they can manage everything remotely.

Today, the hospital can spin up new virtual environments quickly and easily, and scale out rapidly by connecting new nodes to the cluster. As a result, Makita General Hospital has eliminated the need for lengthy hardware procurement cycles.

Mr. Yoshinori Arai concludes: “With Lenovo providing a strong foundation for our mission-critical systems, we can focus on what we do best: delivering excellent care to patients, and helping them to lead happier, healthier lives.”



✔ Reduces power and cooling costs

✔ Cuts rack-space requirements by 75%

✔ Streamlines maintenance processes

¹ Data provided by Makita General Hospital.



“Modernizing our IT infrastructure with Lenovo, Intel, and Nutanix solutions empowers our IT teams to focus on driving digital innovation in healthcare and improving the patient experience.”

Mr. Masayuki Hata

Deputy Director of the System Management Department, Makita General Hospital

What will you do with Lenovo software-defined infrastructure solutions?

The Data-Centered enhance the patient experience with Lenovo smarter infrastructure solutions, powered by Intel® Xeon® Scalable processors.

[Explore Lenovo Software-Defined Infrastructure Solutions](#)



Lenovo and the Lenovo logo are trademarks or registered trademarks of Lenovo.

Intel, the Intel logo and Xeon are trademarks of Intel Corporation or its subsidiaries.

Other company, product and service names may be trademarks or service marks of others.

© Lenovo 2022. All rights reserved.