

Imaging diagnosis gets faster and more effective

GE Healthcare Japan migrates a leading system for medical images to a modular infrastructure, thereby increasing deployment speed by 50 percent



Healthcare

Japan

Business needs

As part of a continued program of innovation, GE Healthcare Japan wanted to deploy one of its leading healthcare solutions to a high-performance consolidated and virtualized platform.

Solutions at a glance

- [Dell Technologies OEM | Embedded & Edge Solutions](#)
- [Dell EMC PowerEdge Servers](#)

Business results

- Supports business growth through improved performance and availability
- Ensures better customer services with order fulfillment 50% faster
- Improves efficiency with platform integration time cut by 66%
- Reduces running costs for customers with power usage down by as much as 66%
- Cuts expenses with solution taking up less room in customer data center

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Katsuji Nakanishi
Commercial Solution Lead, Radiology and Healthcare IT Departments, GE Healthcare Japan

Part of the General Electric (GE) healthcare organization, GE Healthcare Japan is active in medical sectors, in particular, radiology and medical imaging technologies such as CT and MRI. The other two main areas of business cover on-premises and cloud-based medical solutions for hospitals and regional health clinics.

The GE Healthcare Japan product list includes the Centricity Universal Viewer (UV), a picture archiving and communication system (PACS) solution. Each year, GE Healthcare Japan releases up to three service packs for the UV to enhance its functionality. In addition, the company is gradually transitioning the UV solution over to a virtualized environment, offering customers several virtual OS platforms on a single hardware platform.

A successful solution aims to deliver greater value

The company's UV 6.0 solution is aimed at relatively large hospitals with about 400 beds. As a result of the relatively high turnover of images read by radiologists, these institutions need reliable PACS systems and viewer solution. And it's not unusual for the technology to produce up to 150,000 medical images a year to support patient diagnosis. A vital part of the UV solution is its hardware performance and reliability. Katsuji Nakanishi, the commercial solution lead in the radiology and healthcare IT departments at GE Healthcare Japan, says, "The medical image server is an essential part of the IT infrastructure. Should the medical image server stop functioning, the institution ceases to be able to provide accurate diagnostic services and cannot recommend to patients the best treatment plan for their conditions."

Collaboration delivers the answer

When GE Healthcare Japan looked for a hardware solution to support the UV system, it examined proposals from multiple original equipment manufacturer (OEM) vendors. Of the OEM providers, GE Healthcare chose to work with Dell Technologies OEM | Embedded & Edge Solutions, which supports a wide range of healthcare solutions. Indeed, OEM | Embedded & Edge Solutions delivers the platforms that support more than 70 leading healthcare and life sciences software solutions for medical devices and scientific instruments worldwide.

When GE Healthcare worked with embedded & edge solutions Japan, it evaluated a number of embedded & edge solutions over many months before deciding on a Dell EMC PowerEdge VRTX shared infrastructure platform with Dell EMC PowerEdge M630 blade servers. For GE Healthcare Japan, the embedded & edge solutions platform offered the advantage of servers, storage, networking and admin functions in a single chassis. With three PowerEdge M630 servers, the UV solution could easily scale to 150,000 images for healthcare customers. What is more, the high-density platform could deliver all 10 virtual machines needed for the UV 6.0 solution.

Improves efficiency, reducing platform integration time by 66%

GE Healthcare Japan worked with embedded & edge solutions to build the first UV 6.0 based on a PowerEdge VRTX infrastructure running VMware® vSphere® 5 Essentials Plus virtualization software. Toru Nakada, the Healthcare IT (HCIT) supply chain leader at the manufacturing and healthcare global supply chain department of GE Healthcare Japan, says, "The hardware was delivered by embedded & edge solutions, and we assembled the VRTX-based platform in a third of the time for a conventional rack and server configuration."



Enhances issue resolution through easy manageability

Stakeholders at GE Healthcare Japan quickly identified how efficient the VRTX-based solution was. Takuya Kohama, the solution architect on the IT professional service team, part of the HCIT Asia Pacific department at GE Healthcare Japan, comments, “We liked the fact the VRTX design covered details such as the network and the RAID controller. It meant the all-in-one package design delivered exceptional system availability. One redundancy measure is the hypervisor package VMware ESXi mounted on the two embedded SD cards, a feature not available on other vendors’ servers. In the unlikely event that the virtual machine is not able to boot, the system will still be available thanks to features like this. We can also keep running the servers while we swap out pretty much any other component in the system, and the Chassis Management Controller gives us a graphical indication of any problem areas in the hardware build, making it simple to address issues quickly and easily.”

In addition to creating a UV solution for large hospitals, GE Healthcare Japan and embedded & edge solutions also worked together to create a UV system for mid-sized customers. For these sites, PowerEdge T630 servers were selected to run the solution’s software. Since the workstations for radiologists to view the images are also supported by Dell Technologies, it simplified the warranty and maintenance agreement for customers. Nakada says, “It was important for us to examine and ultimately select our solution based on cost and functionality. Comparing Dell Technologies against other vendors, the difference was very clear.”

Better service with order fulfilment more than 50% quicker

GE Healthcare Japan was impressed with the outstanding support services at the platform verification stage. Embedded & edge solutions provided a single point of contact so all inquiries were handled in a timely manner. Comments Nakanishi, “We had a close working relationship with a single team for the duration of this whole project. I believe this was key to making the project a success. This was new technology, and yet we were able to implement the solution with peace of mind thanks to OEM | Embedded & Edge Solutions.” Continues Nakanishi, “All of our departments worked as one on this project, and each issue was addressed as a team.”

According to GE Healthcare Japan stakeholders, embedded & edge solutions beat the competition, saying the time between receiving an order and full implementation would be less than one month compared with more than one and a half months from other vendors – an improvement of more than 50 percent. Nakanishi says, “There were quite a few changes to the hardware design as we worked together with embedded & edge solutions to find the best solution for us. Quotes were delivered on time and embedded & edge solutions gave us detailed information on shipping and delivery schedules that other vendors just could not give us.”

Greater customer service through improved performance

GE Healthcare Japan can offer customers a more reliable UV solution based on the Dell Technologies infrastructure. Furthermore, to simplify deployments of the UV 6.0 solution, GE Healthcare Japan worked with the Dell Technologies Customer Solution Center, which put together training programs for operators.

Yusui Mochizuki, a radiological technologist and solution sales presales specialist working in the HCIT department of GE Healthcare Japan says, “We have found that the number of call-outs we get from our clients has clearly declined since the release of the UV running on the PowerEdge VRTX solution. There is also less work for our colleagues on the maintenance side at the medical institutions. All this means that these institutions can relax and focus on providing excellent medical services.”

GE Healthcare Japan also has the assistance of Dell EMC ProSupport to ensure the UV 6.0 platform delivers consistently high performance worldwide. The service includes a dedicated Dell Technical Account Manager and team of trained technicians to escalate and resolve any issues. They both reduce the risk of downtime and streamline support processes. Says Mochizuki, “In our experience, the dedicated technical account manager of ProSupport enables us to support hospital systems quickly and efficiently so we can focus on developing our solutions.”

Maximum return on investment with extended warranty

Customers of GE Healthcare Japan can also expect a greater return from their UV solution thanks to an extended warranty. Dell Technologies agreed to a request from GE Healthcare Japan that the warranty period, including the SSD, be extended from the usual five years to seven years. Comments Nakanishi, “Normally for medical equipment such as CT and MRI units, the legally mandated service life is around six to seven years. A five-year warranty is already significant in this regard, but when Dell Technologies Japan got their Asian and Global teams to agree to the seven year warranty term, it really set a marker in terms of Dell Technologies’ commitment to our cause.”

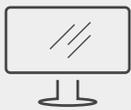
Reduces running costs with power usage down 66%

GE Healthcare Japan has found that customers often face issues with lack of space in their data rooms. Since the embedded & edge solutions-based solution is highly compact, customers are better able to deploy the UV solution, saving expense around powering and cooling costs at the same time. As such, customers can expect to make savings of up to 66 percent with the solution compared with a deployment of 10 physical servers.

Supports plans to offer automated diagnostic services

After the success of the UV 6.0, GE Healthcare Japan is looking to put PowerEdge VRTX technology at the heart of its UV solution for largescale medical institutions. Nakanishi states, “We know that the PowerEdge VRTX can contain up to four blade server units, so there are no issues in terms of system specifications. We heard a report that VRTX is being used as a system platform in a Brazilian hospital that deals with about 300,000 exams each year, so we can see the demand for VRTX-based solutions growing in Japan in the future.”

GE Healthcare Japan is also planning to grow beyond high-performance image diagnosis support systems to creating and supplying systems that offer automated diagnostic services based on data analysis. GE Healthcare Japan is committed to providing Japan’s medical institutions with great services and solutions based on cost-efficient cloud platforms that benefit whole communities and regions.



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