

Ready for a new era of patient care.

How a hyperconverged infrastructure solution from Lenovo and Nutanix helps **Dongguk University Medical Centre (Ilsan)** embrace an integrated care model to improve patient outcomes.

Lenovo Infrastructure Solutions
for The Data-Centered

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Background

Opened in 2005, Dongguk University Medical Center (Ilsan) is a multi-specialty hospital located in the Seoul Capital Area of South Korea. The hospital has a capacity of 1,000 beds and operates some 33 departments, 47 clinics, and 11 specialized centers.

Dongguk University Medical Center (Ilsan) is the first health system of its kind in the world to combine Western and Eastern medicine. Since its inception, the hospital has been committed to breaking new ground and achieving better outcomes in healthcare, with state-of-the-art information systems and technology playing a vital part in driving this ambition.

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Challenge

As the latest step in its journey of continuous care improvement, Dongguk University Medical Center (Ilsan) introduced BestCare 2.0: a data-driven, next-generation healthcare information system (HIS). It integrates multiple healthcare management systems and advanced technology to shape a more holistic, patient-centered approach to care delivery.

To support BestCare 2.0, Dongguk University Medical Center (Ilsan) needed to replace its existing IT infrastructure, which was built entirely on bare-metal servers. In this old environment, each medical department relied on separate servers and storage to support individual workloads, including Electronic Medical Record (EMR), diagnostic and monitoring, and medical imaging applications.

It was already difficult to scale, maintain, and manage this rigid physical setup; the hospital's IT team knew that it would struggle to meet the increased performance and availability requirements of BestCare 2.0. Dongguk University Medical Center (Ilsan) needed a fresh start, and set out to find an infrastructure solution that could grow with it into the future.



“Dongguk University Medical Center (Ilsan) has built a HIS based on Nutanix's HCI to digitalize medical certificates, charts, and patient data.”

Park Soo-hyuk

Assistant Manager, Dongguk University Medical Center (Ilsan)

Why Lenovo? World-class servers support a resilient hyperconverged infrastructure.

Dongguk University Medical Center (Ilsan) believed that a virtualized infrastructure could deliver on its requirements for strong scalability and availability, while also offering easier day-to-day management. After exploring available options in more detail, the hospital decided on a hyperconverged infrastructure (HCI) solution from Lenovo and Nutanix.

“The hyperconverged infrastructure enabled by Nutanix appealed to us as it offered high performance and good manageability,” says Park Soo-hyuk, Assistant Manager, Dongguk University Medical Center (Ilsan). “We chose to deploy Nutanix on Lenovo hardware because of the robust build quality.”

Working with Lenovo and local partner MESA, Dongguk University Medical Center (Ilsan) deployed three hyperconverged clusters for the Best Care 2.0 system. The primary cluster is equipped with six Lenovo ThinkAgile HX5520 nodes, the secondary cluster includes three Lenovo ThinkAgile HX5520 nodes, and the third cluster includes three Lenovo ThinkAgile HX1320 nodes. With the establishment of this environment, the hospital has created server redundancy for safe backup, while helping to ensure compliance with government regulations for bioethics and safety.





“The Nutanix-based private cloud environment, built on robust Lenovo hardware, gives us a scalable and reliable platform for supporting critical medical applications and systems.”

Park Soo-hyuk

Assistant Manager, Dongguk University Medical Center (Ilsan)

Transforming IT to strengthen healthcare.

Today, Dongguk University Medical Center (Ilsan) has successfully migrated all infrastructure, workloads, and applications to a Nutanix-based private cloud environment, underpinned by powerful Lenovo ThinkAgile HX Series servers.

The new hyperconverged infrastructure supports approximately 80 operating systems and 140 workloads across the hospital. All these applications share a common compute and storage pool, consolidating the resources needed for any given workload while simplifying infrastructure management.



“With advanced technologies from Lenovo and Nutanix we can deliver on the ambitions of the BestCare 2.0 initiative, and shape a more integrated and effective healthcare system.”

Park Soo-hyuk

Assistant Manager, Dongguk
University Medical Center (Ilsan)

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Results

With the HCI from Lenovo and Nutanix, Dongguk University Medical Center (Ilsan) has established the firm infrastructure foundation it needs to enable BestCare 2.0. The Lenovo ThinkAgile HX5520 appliances have increased performance for critical workloads by around 50%, ensuring that the hospital can process everything from patient information to large-capacity images rapidly and predictably.

The private cloud environment is also proving to be much simpler and more cost-effective for the IT team to manage. Compared to its previous environment, Dongguk University Medical Center (Ilsan) estimates that the HCI solution from Lenovo and Nutanix has reduced maintenance costs by more than 30%, and cut IT resources and management costs by around 30%.

Medical application and patient data that was once locked away in siloed systems has now been centralized and standardized in a single HIS, backed by a best-in-class hyperconverged infrastructure. As a result, medical teams enjoy faster access to critical information and can collaborate more effectively, empowering them to make better decisions and deliver the best-quality patient care.



**50% boost to
performance for
critical workloads**



**>30% reduction in
system maintenance
costs**



**140 workloads
running smoothly
in a private cloud
environment**



“Efficiently integrated and managed IT infrastructure in an HCI-based private cloud environment has significantly reduced the time and resources spent on system management.”

Park Soo-hyuk

Assistant Manager, Dongguk University Medical Center (Ilsan)

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

The Data-Centered empower medical teams to deliver the highest-quality care with Lenovo smarter infrastructure solutions, powered by Nutanix.

**Explore Lenovo Software-Defined
Infrastructure Solutions**



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