Healthcare

Supporting effective cancer diagnosis

Affiliated Hospital of Xuzhou Medical University

To ensure rapid, effective medical imaging, Affiliated Hospital of Xuzhou Medical University built a new Picture Archiving and Communication System (PACS) using Lenovo ThinkSystem SR590 servers—supporting rapid workflows and timely cancer diagnoses.

Lenovo

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Who is Affiliated Hospital of Xuzhou Medical University?

Founded in 1897 in Jiangsu province, China, Affiliated Hospital of Xuzhou Medical University is committed to pioneering new treatments and empowering medical students to develop the skills and experience required to deliver excellent patient care. AHXMU employs 4,200 people, including 2,000 doctors and 240 professors, and treats over 2.5 million patients each year.

徐州醫科大学附属醫院
THE AFFILIATED HOSPITAL OF XUZHOU MEDICAL UNIVERSITY

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Challenge

As a teaching hospital, Affiliated Hospital of Xuzhou Medical University (AHXMU) plays a crucial role in the development of healthcare services in Jiangsu province. In its latest initiative to improve public health, the organization aimed to enhance tumor and cancer diagnosis by augmenting its medical imaging capabilities—a move aimed at helping doctors identify and treat tumors before they develop into more severe conditions.

Modern medical imaging systems generate vast amounts of high-resolution image data and metadata. Analyzing this data and sharing it with a multi-disciplinary team of clinicians quickly is crucial for ensuring fast diagnoses and early interventions. To support the seamless transfer of medical imaging data between departments and clinicians, AHXMU looked to establish a centralized Picture Archiving and Communication System (PACS).

In parallel, AHXMU planned to incorporate big data analysis and artificial intelligence (AI) capabilities into its medical imaging solutions. The organization looked for reliable, scalable, and performant IT infrastructure to support the new PACS and power compute-intensive AI medical imaging workloads.

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"Identifying conditions like tumors and cancers at an early stage is vital to ensuring the best possible patient outcomes. With effective and reliable medical imaging solutions, we can increase the chances of early diagnoses and treatment."

Spokesperson
Affiliated Hospital of Xuzhou Medical University

Driving medical imaging innovation

To create a strong foundation for its new medical imaging capabilities, AHXMU built a dedicated private cloud for its PACS solution using eight Lenovo ThinkSystem SR590 servers and a single Lenovo Distributed Storage Solution for IBM Storage Scale (DSS-G). With each Lenovo server equipped with 3rd Gen Intel Xeon Scalable processors, AHXU can ensure that it has the high-performance compute resources to analyze medical imaging data quicky and share key information between different hospital departments with ease.

With built-in support for virtualization, the Lenovo solutions enabled AHXMU to establish a hyperconverged infrastructure (HCI) with distributed parallel storage for enhanced scalability and simplified IT system management.

Hardware
Lenovo ThinkSystem SR590
Lenovo Distributed Storage Solution for IBM Storage Scale (DSS-G)

Services
Lenovo Installation Services

And to ensure that its medical imaging data is always available, AHXMU configured four additional hyperconverged nodes for disaster recovery using an active-active architecture. With this approach, AHXMU can automatically fail over to its disaster recovery environment in the unlikely event that the core nodes supporting its medical imaging applications experience unplanned downtime.

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"Lenovo solutions provide the powerful performance, reliability, and flexibility we require to build a modern PACS solution to meet our medical imaging needs. And by supporting a HCI approach, Lenovo solutions enable us to create robust disaster recovery solutions to minimize any disruption to our medical imaging activities."

Spokesperson
Affiliated Hospital of Xuzhou Medical University

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Results

With Lenovo ThinkSystem SR590 servers underpinning its medical imaging applications, AHXMU can process huge volumes of medical images and keep its operations running smoothly around the clock. What's more, clinicians can now analyze and access medical images and metadata faster—helping to support rapid diagnoses of tumors and cancers.

Simplifying IT system management by establishing a hyperconverged private cloud with Lenovo solutions has also helped IT teams at AHXMU dedicate even more time to AI and big-data innovation projects. And with automatic failover capabilities, IT teams can be confident that medical imaging data will always be accessible to clinicians.

With fast, reliable, and flexible hardware from Lenovo at the heart of its medical imaging operations, AHXMU is even better placed to offer timely, effective treatment and achieve the best possible patient outcomes.

✓ Provides always-on availability for medical imaging solutions

✓ Creates a solid foundation for AI and big data innovation

✓ Gives clinicians fast access to medical images and metadata

> "Modernizing our PACS with Lenovo solutions puts Affiliated Hospital of Xuzhou Medical University in an excellent position to become a leader in medical imaging in China and beyond. We're excited by the possibilities for innovation that this project has revealed and look forward to enhancing our medical imaging capabilities in the years ahead."

Spokesperson
Affiliated Hospital of Xuzhou Medical University

Why Lenovo?

IT experts at AHXMU knew that HCI would offer the best foundation for the organization's PACS solution. However, the IT team at AHXMU had never deployed a distributed IT infrastructure before. Lenovo's extensive record of helping other hospitals in the region build powerful virtualized environments convinced the organization that Lenovo was the perfect partner for this project. As well as delivering best-in-class hardware, engineers from the Lenovo provided AHXU with detailed guidance on how to design and architect the new PACS environment. The fact that Lenovo could provide expert support was another key factor in AHXMU's decision to work with Lenovo.

"We began our PACS modernization project at the height of the COVID-19 pandemic, which caused hardware shortages worldwide," says the spokesperson. "With the delivery of our hardware running a little behind schedule due to this supply chain disruption, Lenovo helped us to create a cloud-based test environment so we could start work on the initial phases of the project while we waited for the physical hardware to arrive. We really appreciated this level of support because it helped us stay on track to meet project deadlines."

How do you improve cancer and tumor diagnoses?

Analyzing medical images rapidly and enabling seamless information sharing with Lenovo technology.

Explore Lenovo ThinkSystem

Lenovo