Bringing high-quality care to China's rural populations.

How the **Health Commission of Jingde County, Anhui Province** used Lenovo ThinkSystem ST550 servers, powered by 2nd Gen Intel® Xeon® Scalable processors, to allow local clinics to share patient scans with county-level health centers for rapid, remote diagnosis.

Lenovo Infrastructure Solutions for The Data-Centered

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Background

With a population of around 150,000 people, Jingde County is a county-level administrative area in the southeast of Anhui Province, China. The Health Commission of Jingde County is the local government department responsible for providing equal, inclusive, and convenient access to basic public health services, and allocating public resources to grassroots health services.

In recent years, China’s National Health Commission has promoted access to high-quality medical care nationwide. By taking advantage of the latest scientific and technological advances, it is upgrading medical technology and improving the efficiency of health services across the country—especially in remote and rural areas that have historically lacked advanced healthcare facilities. For example, in Jingde County, many towns and villages in the foothills of the Huangshan Mountains are spread up to 90 kilometers apart, and the difficult terrain means that travel between towns can take up to two days.

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Challenge

Improving health service provision and reducing the cost of medical care are key development goals for the Health Commission of Jingde County. To help achieve these goals, the Commission used state funding to equip the county and each township with brand-new medical imaging equipment.

Imaging modalities such as X-rays, ultrasound scanners and magnetic resonance imaging (MRI) machines play a key role in the diagnostic process, enabling physicians to more rapidly and accurately identify and treat illnesses. However, effectively analyzing and interpreting the results of patient scans requires specialized training and years of experience. Since most local clinics lacked these resources, the Commission decided to harness an innovative data-driven solution to solve the challenge.

By creating a cloud-based picture archiving and communication system (PACS), the Health Commission of Jingde County empowers local clinics to securely send data from their new imaging modalities to county-level hospitals for remote consultation and collaborative review. Results are then returned to the local clinics.

Creating the cloud-based solution posed some tough technical challenges for the Commission. At the local level, the organization targeted new IT infrastructure to store, process, and protect the massive data volumes generated by the imaging modalities. It was crucial to minimize the need for manual management and maintenance of these systems, as sending IT support staff out to remote areas would be costly and time-consuming.

“Local clinics in Jingde County can be challenging environments from the IT perspective: they are typically at high altitudes, lack good protection from the elements, and often experience electrical supply issues. We were looking for a rugged and reliable server platform that could handle the demands of harsh environments.”

Fu Cheng
Director of Information Center, Health Commission of Jingde County, Anhui Province

Why Lenovo? Dependable performance, maximum reliability.

To enable the new county-level cloud-based PACS solution, the Health Commission of Jingde County selected Lenovo ThinkSystem ST550 servers, powered by high-performance 2nd Gen Intel® Xeon® Scalable processors.

Delivering data-center-level reliability in a compact footprint optimized for office environments, the Lenovo solution is easily scalable, with support for Serial Attached SCSI and SATA drives, and a maximum capacity of over 300 TB.

Equipped with the innovative 2nd Gen Intel® Xeon® processor Scalable family, the new Lenovo ThinkSystem ST550 servers are capable of processing both large volumes and velocities of data. With increased performance of 36% over the previous generation of Intel CPUs, the new architecture supports the Intel® Deep Learning Boost Vector Neural Network Instructions (VNNI), which accelerates processor performance for demanding data-driven workloads.

“The Provincial Health Commission of Anhui Province had already been using Lenovo ThinkServer RQ940 servers successfully for a number of years before the cloud project. Our experience with Lenovo solutions was very positive, and we were confident that the new Lenovo ThinkSystem ST550 servers would meet our stringent requirements.”

Fu Cheng
Director of Information Center, Health Commission of Jingde County, Anhui Province

Easy to deploy, simple to manage.

Working with an expert team of Lenovo infrastructure experts, the Commission deployed more than 20 Lenovo ThinkSystem ST550 servers in villages and towns across the region. Thanks to remote monitoring and management capabilities from Lenovo, the Commission's Information Center can perform almost all required maintenance on the solutions remotely—eliminating the need for IT personnel to travel to the clinics in person.

"As Jingde County is a very remote part of the country, we particularly appreciated Lenovo's responsive, high-touch after-sales support services. Lenovo provides comprehensive support resources, and we could always get help and guidance when we needed it."

Fu Cheng
Director of Information Center, Health Commission of Jingde County, Anhui Province

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Results

With Lenovo ThinkSystem ST550 servers supporting its new county-level cloud-based PACS solution, the Health Commission of Jingde County is realizing its goal of boosting access to high-quality healthcare across Anhui Province. Today, even patients in hard-to-reach rural areas have rapid access to leading-edge medical diagnostics. Ultimately, the Commission predicts that the enhanced services will contribute to improved care outcomes, as well as a better experience for patients.

Building on the success of the project, the Commission is now looking to the future. For example, the organization is exploring the possibility of deploying additional servers in a high-availability configuration—helping to ensure that vital diagnostic services are available in the unlikely event of unplanned downtime elsewhere in the environment.

- **Enables high compute performance and storage capacity to support demanding medical imaging workloads**
- **Delivers high levels of reliability and remote management capabilities, minimizing the cost and complexity of manual maintenance**
- **Supports game-changing medical services for rural populations, contributing to improved care outcomes and patient experiences**

“Thanks to Lenovo ThinkSystem servers, we are able to offer remote medical diagnostics to patients in even the most remote areas of Anhui Province. Even though they are deployed in demanding, non-data-center environments, the Lenovo solutions have never let us down.”

Fu Cheng
Director of Information Center, Health Commission of Jingde County, Anhui Province

What will you do with Lenovo data center infrastructure solutions?

The Data-Centered improve healthcare access in rural communities with Lenovo smarter infrastructure solutions, powered by Intel®.

Explore Data Center Infrastructure Solutions

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