

NANJING CHILDREN'S HOSPITAL

Medical facility increases access to patient imaging system with EMC Isilon scale-out storage



ESSENTIALS

Industry

Healthcare

Company Size

2,000 employees

Business Challenges

- Increase in concurrent PACS users created performance degradation
- Storage capacity was insufficient to match demands from medical technology
- Storage could not scale as medical records grew

Solutions

- EMC [Isilon X-Series](#)

Results

- Delivered consistent performance to all PACS users even when user numbers increased
- Enabled rapid access to recent and archived medical imaging records
- Achieved savings through efficient storage utilization
- Delivered the ability to archive records throughout a patient's lifetime

IMPROVING ACCESS THROUGHOUT THE LIFETIME OF PATIENT DATA

[Nanjing Children's Hospital](#) (NCH) is the largest children's facility in Jiangsu Province and ranks in the top 10 hospitals in China. Averaging approximately 7,000 to 8,000 patients a day, NCH treats more than four times the number of patients of other children's hospitals within the province. The hospital relies heavily on a patient archive and communication system (PACS) from Phoenix (Shanghai) Information Technology for x-rays, computerized tomography (CT) scans, and magnetic resonance imaging (MRI) scans that support accurate and rapid diagnosis and treatment by radiologists and attending physicians.

Demand for medical imaging continues to grow and NCH wanted to deliver consistent system performance of its PACS solution to meet the rising number of concurrent users. In addition, the hospital wanted the flexibility of single file system storage that is easily searchable and complies with government regulations for the archival of medical records for a minimum of 20 years. However, NCH's existing storage supported both its PACS and Hospital Information System (HIS) systems and did not provide the performance or capacity required to meet future technology advances in both systems. In addition, the storage was overly complex to manage.

NCH partnered with EMC to become the first hospital in Jiangsu Province to deploy EMC® Isilon® X-series scale-out storage for PACS.

As a result of the Isilon implementation, NCH has enabled PACS users to quickly search and view records, providing physicians with [fast access](#) to patient data. Also, the hospital now has the confidence to [add users](#) as demand requires without any performance degradation. As a pioneer in using Isilon, the hospital continues to deepen its reputation for having a strong focus on using technology to improve patient care outcomes.

ENVIRONMENT

NCH implemented EMC Isilon X200 series scale-out storage as the platform for its PACS solution, enabling quick scalability, maintaining system performance as more users and files are added, and speeding access to large numbers of recent and historical medical images and records.

Sunnan Qian, IT Manager at Nanjing Children's Hospital, says, "We've had a long collaboration with EMC and I trust the team we work with here in Nanjing. We communicated frequently with Isilon engineers during the process and I felt confident that Isilon storage had the capacity, performance, and ease of scalability we required to improve access and speed of file retrievals in PACS."

REDEFINE

CUSTOMER PROFILE

EMC²

CONSISTENT, FAST ACCESS TO MEDICAL RECORDS

NCH has realized a number of advantages to its patient service delivery by moving PACS to the Isilon platform. The hospital can increase the number of physicians and doctors accessing the system without impacting performance or slowing access to medical images.

“In the past I didn’t want to add too many users to PACS because I knew it would affect the experience of the current users in the system. Now I can increase the number of PACS users as demand requires with the confidence that performance will be maintained, ensuring we provide our physicians with consistent, fast access to medical records,” says Qian.

DELIVERING COST EFFICIENCIES THROUGH HIGH UTILIZATION RATE

The hospital has gained efficiencies in its operations through improved space utilization within its storage platform. Where previously different volumes were required, having a single file system means realizing greater economies in its use of resources.

Qian says, “In working with separate storage volumes there was always space left in each one that couldn’t be used, requiring us to purchase new volumes and effectively waste costly resources. We’ve gained cost efficiencies in being able to maximize the use of our storage with EMC Isilon. We simply add further nodes when we need greater capacity.”

“Now I can increase the number of PACS users as demand requires with the confidence that performance will be maintained, ensuring we provide our physicians with consistent, fast access to medical records.”

Sunnan Qian
IT Manager at Nanjing Children's Hospital

NCH has improved its ability to maintain the health of its systems in delivering a consistent user experience to its staff.

“One of the clear benefits in running high-performance systems within a hospital is the ease of monitoring those systems. Understanding performance during peak times and proactively addressing potential problems definitely results in savings in administration time,” says Qian.

SUPPORTING LIFETIME PATIENT RECORDS THROUGH LONG-TERM ARCHIVAL

By moving the PACS medical imaging system to a single file system, IT has made records easy to archive and search when required for diagnosis and treatment. The hospital can also provide long-term access to medical records over a patient’s lifetime. Doctors and physicians can quickly access relevant records from any time period, and patient files can be archived well in excess of current government regulations.

Company Overview

Nanjing Children's Hospital in Jiangsu Province, China, is a 1,400 bed facility providing medical, research, teaching, and rehabilitation services. With annual outpatients numbering 1.89 million patients, the hospital has a strong focus on using technology to carry out cutting-edge advanced diagnostic and treatment techniques.

Qian says, "Our patients are children. If they have surgery under our care and then come back to us as adults and need the images and scans for particular health needs, we can ensure their records are always available to support their lifelong wellbeing and medical treatment."

As a leading medical facility in its implementation of technology, NCH has built a reputation for its use of technology in advanced diagnostic and treatment techniques. With future plans to expand its Isilon platform to run virtual desktop technology and future hospital applications, NCH has become a pioneer in the sector.

"We were the first hospital in the Jiangsu Province to use Isilon as the backbone for our core medical system, and since then we've noted that other hospitals have followed suit after seeing the consistency in performance we've been able to achieve," says Qian.

CONTACT US

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