



# Nutanix helps leading medical center in China deliver smarter healthcare

By adopting Nutanix, Shanghai Mental Health Center integrates virtualized workloads in a private cloud and accelerates the development of digital healthcare services

## BUSINESS BENEFIT

The Shanghai Mental Health Center's IT has evolved in stages. At first, information systems supported financial management but gradually they began to support medical diagnosis and treatments. Today, the core IT platform supports all the center's operations, including research, and will support the evolution of online as well as app-based healthcare solutions.

“Technology has played a key role in the development of the Shanghai Mental Health Center. With Nutanix, we gain the advantages of software-defined IT through a solution that works with leading hardware platforms. The Nutanix HCI will meet Shanghai Mental Health Center's existing and future needs, helping to build a smarter medical facility.”

- Qiu Hong, Director of Information and Statistics Department, Shanghai Mental Health Center

## INDUSTRY

Healthcare

## BENEFITS

- Supports a variety of virtualization scenarios
- Reduces IT management and maintenance costs by 15-20%
- Makes storage expansion 30-35% faster
- Simplifies management of 250 terabytes of file storage
- Enables digital healthcare development

## SOLUTIONS

- Nutanix Enterprise Cloud OS
- Nutanix Prism Pro
- Nutanix Files

## APPLICATIONS

- Electronic medical records
- Medical research system

Currently, Shanghai Mental Health Center is running virtually all its critical workloads on a Nutanix hyperconverged infrastructure (HCI)-based private cloud. Core operational systems and scientific research projects sit on the HCI, which provides easy management of compute, storage, and networking resources. To meet the rapid growth of data and applications, the center simply attaches additional nodes to the HCI for synchronous expansion of performance and capacity. Plus, the IT team no longer has to plan servers, storage, and networking separately, improving efficiency, management, and cost effectiveness.

## CHALLENGE

Founded in 1935, Shanghai Mental Health Center is a leading mental health hospital in China. It delivers consultations and treatments while supporting education, scientific research, and academic exchanges with centers abroad. It is also the largest mental health institution in China, with more than 1,800 beds.

In 2018, the General Office of the State Council issued *Opinions on Promoting the Development of Internet plus Medical Health*, encouraging medical centers to expand services using IT. As such, it provided the Shanghai Mental Health Center and others with guidelines on the development of digital healthcare services.

Qiu Hong, director of the information and statistics department at Shanghai Mental Health Center, says, "With rapid development and the burden of scientific workloads increasing, the shortcomings of our three-tier infrastructure began to appear. It was complex, and operation and maintenance costs were high. The storage system offered poor scalability and utilization was low. The system was also complex to upgrade. It couldn't meet our long-time development needs. And different management interfaces for servers, storage, and virtualization impacted our effectiveness."

Many patients in Shanghai Mental Health Center need long-term care, so the preservation of medical records became a key issue. In addition, the center was undertaking many important research projects, involving the processing and retention of a large number of documents and images. Thus, efficient and stable storage became a priority.

As things stood, computing resources in each center department ran independently. Files were scattered across departments, making it difficult to share resources. With no unified data storage management, data security had also become a key issue. Furthermore, it was difficult to manage and maintain data and documents. In sum, the center wanted to break down the barriers of siloed data, integrating and optimizing the storage system and accelerating the flow and distribution of data.

## SOLUTION

Shanghai Mental Health Center looked to digitally transform its operations. However, it was concerned that the rapid evolution of the center's IT infrastructure would be too much for the IT team, who would be unable to fully utilize the new technologies. To dispel concerns, the center looked for a hyperconverged infrastructure (HCI), integrating computing, storage, and networking.

After careful evaluation, Shanghai Mental Health Center finally chose Nutanix, a major IT solution provider. Qiu says, "HCI is relatively new in China, so it was very important to choose an advanced and mature solution. This level of IT integration must be stable, reliable, and secure."

Qiu adds that the center did a lot of research about HCI at the beginning of the project. “The most impressive aspect of a Nutanix HCI infrastructure was its advanced technology and simplicity to expand, which met our business needs,” he says. “Indeed, HCI is a suitable option for any virtualized workloads.”

In 2018, Shanghai Mental Health Center deployed a cluster of four Nutanix nodes. Since then, six nodes have been added for two important scientific research projects. Apart from the center’s picture archive and communication system (PACS) and hospital information system (HIS), all Shanghai Mental Health Center critical systems run on its Nutanix HCI in a private cloud.

## **CUSTOMER OUTCOME**

### **Supports a variety of virtualization scenarios**

It is a huge project and the center continues to migrate its applications to Nutanix. Qiu says, “Many of our users are continuously changing their requirements and we need to add capacity. Only our HCI can meet the requirements. By adding nodes, we can continue expanding and adding performance and storage capacity. In addition, the HCI is easier to manage, simplifying operations and management, making growth easier.”

### **Reduces costs by 15-20%, makes storage expansion 30-35% faster**

Using Nutanix Prism Pro, the center has greatly reduced IT complexity, while also cutting back on operation, maintenance, and management costs. By integrating IT resources across the data center, the organization has lowered complexity and unified management. Thanks to the HCI, applications are rapidly deployed, while the flexibility and scalability of the overall platform are enhanced. After deploying the Nutanix HCI, the Shanghai Mental Health Center reduced management and maintenance costs by 15-20 percent, while making storage expansion 30-35 percent faster.

The Nutanix solution has also greatly reduced the pressure on the IT team. Qiu adds, “We had a good deployment experience with Nutanix because it offered us comprehensive and professional support and helped optimize the infrastructure.”

### **Simplifies management for 250 terabytes of file data**

The neuroimaging lab at Shanghai Mental Health Center uses Nutanix Files to store and centrally manage the department’s 250-plus terabytes of file data. Software-defined Nutanix Files ensures high availability, large-scale expansion, simple management, automatic optimization, and self-repair. All features come out-of-the-box and can be deployed in minutes and managed through an integrated management pane. Nutanix Files is simple, flexible, and intelligent—exactly what the neuroimaging lab needed.

## NEXT STEPS

“The Nutanix HCI is fully capable of meeting our needs,” says Qiu. “In the future, as the number of scientific research projects increases, we will expand our existing capacity. For example, we are planning the implementation of disaster recovery across our hospital, as well as in-depth mining and intelligent analysis of our data. The HCI architecture has laid a solid foundation for us.”

Shanghai Mental Health Center is actively exploring online healthcare. Because virtual medical services are relatively new, Shanghai Mental Health Center has launched only a few online services for follow-up consultations and medical prescriptions. Qiu says, “In the future, when the digital healthcare gains scale, the Shanghai Mental Health Center will integrate online and offline workloads more seamlessly, but the HCI will still be the cornerstone of our architecture.”



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