

A f patient care to the next level with Nutanix

Nutanix Cloud Platform provides Apollo Hospitals with the flexibility to

Apollo Hospitals is a leading provider of integrated healthcare services in India. It has digitized many key hospital systems across its 72 hospitals, adopting hospital information system (HIS), electronic medical records (EMR) and Picture Archiving and Communication System (PACS) solutions. Yet, the infrastructure underpinning the software was complex, with a web layer, application layer and database layer making them hard to scale and to fix when problems threatened performance.

Apollo Hospitals is now running the HIS, EMR and PACS applications on the Nutanix Cloud Platform and has turned the complex situation around. Patient flows are improving thanks to the new available capacity and clinical efficiency is better with electronic patient records highly available even during peak periods. Also, clinicians have ready access to diagnostic-quality X-rays and imaging scans despite the growing amounts of data. As a result of hardware consolidation, Apollo Hospitals has freed up space for patient care, the IT team can now focus on strategic projects, like migrating a few remaining PACS systems from legacy IT to Nutanix.



“Rearchitecting our applications for the cloud is on our roadmap. Clearly, the hybrid cloud and multi-cloud is the future of healthcare, and it’s going to be easier to make that transition with Nutanix as they provide us with insights and support to move our IT to the next level. Our relationship with them has evolved to become a strategic IT partnership.”

– Arvind Sivaramakrishnan, CIO, Apollo Hospitals

INDUSTRY

Healthcare

BENEFITS

- Improved patient flows with hospital admission work completed in seconds
- Increased clinical efficiency with electronic patient records highly available even during peak periods
- Enhanced patient care capacity by reallocating data center space for patient care because of consolidating IT by more than 66%
- Provided clinicians fast access to diagnostic-quality X-rays and imaging scans to thanks to highly scalable storage
- Freed time for high-value projects by eliminating firefighting of routine management problems
- Established foundation for hybrid and multicloud strategy through a single management plane

SOLUTIONS

Nutanix Cloud Platform

- Nutanix AOS
- AHV hypervisor
- Prism management software

Applications

- Hospital Information Management System
- Electronic Medical Records (EMR) System
- Picture Archiving and Communication System (PACS)

CHALLENGES

Apollo Hospitals is a leading provider of integrated healthcare services in India. It runs 72 hospitals, offering 10,000 beds across the country, including major cities such as Bangalore, Delhi and Chennai. Its integrated care services cover primary care clinics, diagnostic centers, pharmacies and telemedicine centers.

Apollo Hospitals has digitized processes, adopting a hospital information system (HIS) to manage electronic medical records (EMR), improve hospital management and provide insight for healthcare decisions. In addition, a Picture Archiving and Communication System (PACS) securely stores medical images and makes them easily accessible to clinicians.

Yet, the infrastructure underpinning both HIS and PACS was becoming complex. Managing a web layer, application layer and database layer made it hard to scale and resolve performance bottlenecks. At times, it could take 30 minutes to get the performance issues resolved. There was concern these problems would happen during peak periods when the hospitals and clinics are busiest, and clinicians need fast access to data more than ever.

Apollo wanted to remove the complexity and make IT more supportive for the hospital's development and to get the organization ready for a hybrid, multicloud world.

SOLUTION

The digital transformation team at Apollo Hospitals had been following the evolution of hyperconverged infrastructures (HCI) for some time. Apollo was aware that HCI would remove complexity, making performance optimization simpler and lay a strong foundation for Apollo Hospital's cloud future.

The responsiveness of the Nutanix team coupled with the performance and manageability of the Nutanix Cloud Platform convinced management to start replacing the legacy infrastructure. The digital transformation team began moving the web and application layers for the HIS, including the EMR, over to Nutanix nodes for all the hospitals. Soon after, the team also began moving the PACS across too.

Today, Nutanix is delivering the HIS and EMR applications across all 72 hospitals belonging to Apollo Hospitals. The team is completing the rollout of the PACS application on Nutanix for a few remaining hospitals. The infrastructure runs on Nutanix AOS with AHV as the hypervisor and Nutanix Prism management software to simplify control.



“The technologies in a hyper-converged infrastructure like Nutanix, are so integrated that they have reduced downtime drastically. Nutanix has consolidated hardware resources and maximized their use, resulting in fewer servers, smaller data center footprint, and lower power and cooling requirements”.

- Natish Chauhan, Senior Manager for Infrastructure and Data Center Operations, Apollo Hospitals

CUSTOMER OUTCOMES

Improving patient flows using the capacity to digitize processes

By migrating the HIS application to the Nutanix Cloud Platform, Apollo Hospitals has transformed its capability to speed up patient flows. Nowadays, patients enter their details at kiosks in the hospital entrance. The data is transmitted to the main registration desk, so that by the time a patient arrives at that point, all registration work is completed, and the patient can collect any documentation they need for clinicians.

Increasing efficiency with electronic patient records highly available during peak periods

Clinicians have fast and reliable access to the EMR system even during the busiest periods when demand on the system is at its highest. Using Nutanix Prism, the infrastructure team can see how the EMR is performing and add capacity if any bottlenecks start to appear. Apollo's performance issues are now resolved on the fly instead of taking up to 30 minutes, allowing the hospitals' medical professionals to focus just on treating patients.

Enhancing patient care by consolidating IT by more than 66%

Apollo Hospitals has made space inside its hospitals for patient care thanks to the significant downsizing of its data centers. The migration to the Nutanix Cloud Platform has consolidated hardware by more than 66 percent, freeing up room for medical teams. At one site, Apollo plans to eliminate the data center as it is and run Nutanix from a data room to give space back to the hospital management.

Helping clinicians make diagnoses faster thanks to highly scalable storage

Besides consolidating its IT, Apollo Hospitals has gained the flexibility to provide fast access to the X-rays and imaging scans. The hospitals archive X-rays and imaging scans that are more than three years old, but retain the earlier data on their production systems. This "live" data, which is compressed, is growing by around 200 gigabytes a year and is vitally important to identifying live-threatening diseases. With PACS running on Nutanix, Apollo is able to handle the rate of data growth because it's easy to add more capacity. Additionally, it optimizes PACS performance, making X-rays and imaging scans readily available.

Freeing up time for high-value projects owing to no more IT firefighting

The simplicity of the Nutanix Cloud Platform means the infrastructure team is no longer firefighting IT challenges. The team is able to spend time on more important projects like deploying PACS on Nutanix at all hospitals to provide better patient services.

Apollo would recommend Nutanix to any healthcare service provider. Not only does it support the growing digitization of healthcare systems, but provides a pathway to greater cloud integration. With Nutanix, Apollo will be able to easily make the transition to the hybrid or multi-cloud.



“Registration could take 8 to 15 minutes in the past, but through digitization and our HIS on Nutanix, it takes around 30 seconds. Patient flows are better, and our registration points are no longer crowded.”

- Natish Chauhan, Senior Manager for Infrastructure and Data Center Operations, Apollo Hospitals

NEXT STEPS

Looking ahead, Apollo Hospitals will implement Nutanix Cost Governance (formerly Beam) to optimize its Nutanix-based environments. The solution will play an important role in helping keep private, public and hybrid multicloud environments under cost control in the years to come. Also looking to a cloud future, the healthcare provider is planning a hybrid cloud strategy with Nutanix to reduce complexity around extending or bursting applications and data between on-premises environments and the cloud.



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