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Jitendra Shrivastava, Senior Manager - IT, Cloudnine Hospitals



CASE STUDY

Cloudnine Hospitals Improve Data Access for Staff, Meet Government Regulations and Cut Data Center Costs With Hitachi Content Platform

Challenge: Create scalable storage infrastructure that addresses the challenges associated with explosive growth of data.

Solution: Hitachi Content Platform with NxtGen Data Protection-as-a-Service, delivered via cloud.

Outcome: Significant capital expenditure (capex) savings due to the scalable, pay-per-use model.

The Challenge

Cloudnine Hospitals operates a chain of more than 20 hospitals across India, delivering maternity and neonatal care to hundreds of patients on a daily basis. The hospital network is required to store the enormous volume of patient data, generated on a daily basis in an online archive.

“We were growing very rapidly. In 2006, we were just one hospital, but by 2015-16 it was 10 or 12,” recalls Jitendra Shrivastava, Cloudnine Hospitals’ Senior Manager - IT. “We never thought the data would grow at such speed, and at that point, we had to put a stopgap to find a new technology to manage them. As a maternity service provider, we had the mandate of the government to preserve the patient data for a period of 7-21 years. It raised the concern of how we preserve the huge volume of data generated in the form of scans, x-rays, lab reports, etc.,” he explains.

Another concern was the selection of the right technology. Cloudnine realized that unless the technology is readily available

to the doctor or the ground staff, the implementation would not add value to the business. The staff needs on-the-fly access to the data, both old and new.

Since it is mandatory to keep patients’ records over a long period, Cloudnine wanted to build an infrastructure that can store the enormous volume of data generated every day. The massive upfront investment required for building such a facility proved to be a significant challenge. And the scalability of the infrastructure was another top concern because Cloudnine is constantly looking to expand to new locations.

As a healthcare service provider, Cloudnine did not want to invest in internal IT resources. Rather, it was looking at IT as a catalyst to help the hospital improve its service delivery.

The Solution

Cloudnine approached a number of storage vendors in the market seeking a robust and scalable storage solution that does not consume huge resources.



Cloudnine Hospitals

INDUSTRY

Healthcare

SOLUTIONS

Content Mobility, Data Management, Private Cloud

HARDWARE

Hitachi Data Ingestor

SOFTWARE

Hitachi Content Platform

SERVICES

Data Protection-as-a-Service (DPaaS) provided by NxtGen

Outcomes

- Improves staff access to data, for greater service to expectant mothers.
- Meets government compliance requirements for retention.
- Ensures significant cost savings.
- Allows greater scalability for future expansion.

However, most of the solutions required a huge upfront investment of several thousand dollars. After exploring a number of options, Cloudnine, with the help of its IT partner, NxtGen, selected Hitachi Vantara as its storage partner. NxtGen, which has invested in Hitachi Content Platform, has been delivering cloud solutions to Cloudnine, so the choice was logical for the hospital. Together, Hitachi Vantara and NxtGen offered a highly scalable cloud storage platform with no upfront investments.

"Initially we explored traditional NAS or SAN storage options available in the market, but none of the OEM providers were able to provide a solution matching our requirements. We found the solution offered by Hitachi and NxtGen the best as it offered a flexible architecture with almost zero capital investment," says Jitendra Shrivastava.

He added, "Each year, our ultrasound machines alone can easily produce as much as one terabyte of data. As a result, we needed to increase the overall digital IT initiative at each site. The NxtGen DPaaS offering helped us eliminate conventional tape backups and improved our inter-clinical collaboration by accelerating data speeds from 3.5MB/s to roughly 1GB/s. This has enabled seamless patient data access and is a huge process improvement in digital patient care for us."

The solution set includes Hitachi Content Platform (HCP) with NxtGen Data Protection-as-a-Service, along with Hitachi Data Ingestor (HDI) acting as a local caching device. The centralized storage provided by HCP not only reduces data management complexity but also allows efficient local data access. The HDIs installed at each branch of the hospital

allowed convenient local storage without utilizing much of the internal resources. Cloudnine also benefitted from the cloud management service that covers round-the-clock security and software upgrades.

"Hitachi and NxtGen proposed a core and edge model with HCP in NxtGen data center at the core and all the 20 hospitals at the edge. There was minimal hardware investment. All we needed was a small server that goes into a standard rack at each center," explained Jitendra Shrivastava

During the first phase, migration was carried out at nine hospitals; later, it was expanded to five more. Cloudnine is progressively migrating the data at other hospitals.

The Outcome

"We had two options to choose from," recalls Jitendra Shrivastava, "the capex model and the opex (operating expenditure), model. We chose the opex model wherein we don't have to spend on day one. For three years, we get the service delivered as a monthly package; and after three years, we get it exclusively as ours."

- With HCP on NxtGen, Cloudnine was able to build an opex-based storage infrastructure that eliminated the capex associated with building an in-house storage system.
- Since the data center, networks and other aspects of the cloud services are managed by the provider, the Cloudnine does not require internal resources to handle them.
- The scalable architecture supports Cloudnine's future expansion goals without causing the hospital to incur additional expenditure.

- The monthly billing model ensures that Cloudnine is charged for only the resources utilized during the month. The future-ready infrastructure thus paves way for resource optimization and cost savings.
- The solution improves service delivery by helping eliminate process delays due to poor management of records.
- To safeguard the entire journey of expecting mothers, Hitachi Vantara and NxtGen offer a secure, private cloud, in which all patient records are kept private.

"We are able to archive all our files with 20% compression, which is the industry-best practice to follow. Even after compression we are able to deliver the reports to doctors with the same ratio and pixel quality," Jitendra Shrivastava concludes.

About NxtGen

NxtGen Datacenter-as-a-Service addresses the storage challenges of its enterprise clients. NxtGen invested in Hitachi Vantara to create synergy by leveraging the expertise of both companies to further improve the service delivery. NxtGen's data centers are marked by their elasticity, pay-per-use model and availability.

About Hitachi Vantara

The key to new revenue streams, better customer experiences and lower business costs is in your data. Hitachi Vantara merges operational and informational experience to elevate your innovation advantage in data and deliver meaningful outcomes. The world is changing the way we work. We're changing the way the world works.

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