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C A S E S T U D Y

Hospital's Data Survives Hurricane Katrina

The Southeast Louisiana Veterans Health Care System (formerly the VA Medical Center, New Orleans) and its outpatient clinics located throughout southeast Louisiana are committed to providing high-quality, compassionate, and safe health care to the more than 220,000 veterans who live in the 23-parish region they serve. The 354-bed acute care facility was affected by flooding following Hurricane Katrina in August 2005.

Situation

Hurricane Katrina, which made landfall near the Louisiana-Mississippi border on the morning of August 29, 2005, and the subsequent flooding caused by the failure of the New Orleans levee system, resulted in one of the largest natural disasters to hit the United States.

Among other things, the hurricane resulted in the sudden closure of several hospitals, including the Southeast Louisiana Veterans Health Care System and its outpatient clinics, which suffered extensive damage. The closure of this system severely damaged the availability of healthcare services for veterans in the New Orleans area. This closure impacted the overall healthcare infrastructure of New Orleans, as well.

Business Challenge

"This has been a year-long process that began with trying to determine the technical status of the hospital," said Kenneth Allen, Health Systems Specialist for South Central Health Care System. "We had to determine what information was retrievable among the absolute chaos of the first week after Katrina," said Allen.

> "We were able to recover all of the patient images off of the Plasmon libraries... We are now primarily using the Plasmon UDO Archive Appliance for its long-term recoverability."
>
> Kenneth Allen
> Health Systems Specialist
> South Central Health Care

As a result of the flooding caused by Katrina, all medical records from the hospital were destroyed or severely damaged. The only recoverable data found was stored on optical disks from Plasmon™, DISC, and Phillips and stored in the empty hull of the New Orleans hospital. While the optical disks were not immediately exposed to flood waters, the high humidity from stagnant waters two floors below caused significant concern over the reliability of the optical disks containing sensitive patient data.

The goal for Kenneth Allen and his team, was to recover as much data as possible and to develop a new disaster-recovery plan that would prevent a catastrophe of this magnitude in the future.

The hospital's medical-records storage area was comprised of a SAN with two clustered servers, five image Gateway servers, a RAID system, and a Plasmon G638 archive library. This equipment was housed on the second floor of the main hospital building and was the main SAN that stored all patient records.

Once onsite, the hospital recovery team discovered that water had entered the basement of the building, knocking out all utilities — electrical, plumbing, and communications — and was straining the hospital's emergency and non-emergency systems. After the system safeguarding the computer network exhausted its battery power, the electronic medical patient records became unusable. The backup power had only lasted a few hours and with the entire area's communication and transportation in disarray, the medical center's IT staff could neither access nor drive to the hospital to perform a safe shutdown of the system.

QuickView

Organization:
>>Southeast Louisiana Veterans Hospital

Industry:
> Healthcare

Application:
> Image Storage

Integrator:
> Hewlett-Packard

Solution:
> Plasmon™ G-Series Library
> UDO Archive Appliance™

ROI:
> 95% patient data recovery after Katrina

UDO™ stands up to a Category 5 hurricane, when other storage technologies fail.

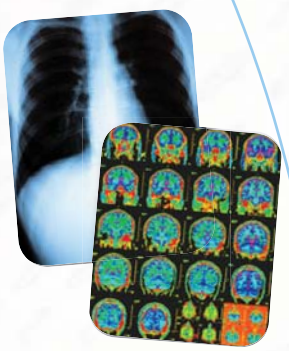
Moreover, the RAID disk drives in the SAN and the servers had been physically removed in an effort to prevent the theft of sensitive patient records. Unfortunately, driven by haste, they pulled the disks from the drives and put them into unmarked boxes that no one was ever able to find. All the RAID data was lost.

"Had the RAID drives remained in place, and if power and network connectivity had been quickly restored, then this tragedy wouldn't have been so bad," said Allen. "However, with the loss of the RAID drives, the lack of a complete series of backup tapes, and the uncertainty of reliable utilities, 'normal' disaster-recovery plans would have been futile."

Solution

Allen and his team retrieved the optical disks with the stored patient records and images, including media from the Plasmon library for recovery efforts. The team brought the 1,100 disks, which represented approximately 6.2 terabytes of data, to its facility in North Little Rock, Arkansas for recovery. There they built a new SAN exclusively for the purpose of recovering patient data.

"The media had been exposed to extremely high temperatures and humidity from brackish standing water, they were covered in debris and dust for more than a month," said Allen. "We were able to recover all of the patient images off of the Plasmon libraries. We had just started to migrate to UDO™ (Ultra Density Optical) for an archive solution when the hurricane hit. We are now primarily using the Plasmon UDO Archive Appliance for its long-term recoverability."



A year after the tragedy, the Southeast Louisiana Veterans Health Care System has restored 95% of its pre-Katrina patient data.

This was a community effort with many commercial companies pitching in to help without asking for anything in return. Generous work to clean, reload, and restore as much information as possible was undertaken by Sony, Plasmon, Kodak, and EMC.

Although the New Orleans hospital building itself is no longer available for patient care, veterans continue to receive some diagnostic services from a myriad of outpatient clinics in the surrounding area. Clinicians working in these outpatient clinics have been able to access restored patient data since February of 2006 through the VA's VistA Remote Image View process.

"Our disaster-recovery plan for the hospital was backup tape and RAID," said Allen. "The backup tapes were never found in the debris and the RAID system was lost. When people start thinking about disaster-recovery plans, they need to determine the levels of disaster and then develop the appropriate solution. Since this disaster, we have begun a migration to Plasmon's UDO Archive Appliance solution to meet our policies and regulations for record retention."

Alliance Storage Technologies offers the only enterprise-class active archive solution that ensures data permanence, authenticity, access, longevity and removability, at the low total cost of ownership that businesses demand.

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Alliance is ISO 9001 certified.

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