

# CASE STUDY

**INDUSTRY:** HEALTHCARE

Cabell Huntington Hospital  
Huntington, West Virginia, USA

**APPLICATION:** MEDICAL  
IMAGING

**INTEGRATOR:** GE®HEALTHCARE

**SOLUTION:** CENTRICITY®  
PACS SYSTEM WITH PLASMON  
UDO ARCHIVE APPLIANCE

## The Organisation

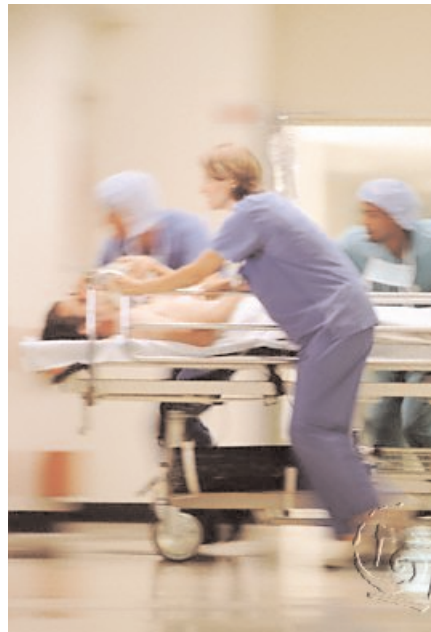
Cabell Huntington Hospital (CHH) opened its doors in 1956 and today serves as a 268 bed, not-for-profit, regional referral center located in Huntington, West Virginia. CHH cares for patients from more than 29 counties throughout West Virginia, Eastern Kentucky and Southern Ohio with nearly 2000 employees. CHH also operates as a teaching hospital affiliated with Marshall University Schools of Medicine and Nursing. One of the top-rated hospitals in the area with a highly-skilled staff and the most advanced equipment, CHH has become a leader in emergency treatment, mother and baby health care, women's health, surgical, diagnostic and therapeutic services.

## The Challenge

Until recently, CHH physically archived its images on film, then moved the physical images to one of four on-site radiology file rooms. Films older than a year were taken off-site and brought to the hospital by a courier when requested. Image recovery and access to this physical image management system was slow, laborious and expensive, but necessary to adhere to hospital policies and regulations regarding patient record retention.

The longevity and potential disaster recovery issues of a physical archival storage system concerned CHH. At the same time, regulations and hospital policies regarding patient record retention continued to increase. In the case of fetal ultrasound, for example, West Virginia law requires the images be kept for 21 years (legal age + three years). The previous physical image archival system was no longer sufficient to meet the goals and objectives of the hospital.

With more than 150,000 exams performed per year requiring approximately 3.5TB of annual storage and an expected 15-20% increase in the number of exams performed per year, CHH needed a long-term archival solution with easier access, safer retention and adherence to compliance policies.



*Cabell Huntington Hospital  
Completes Two-Tier Storage  
System with Plasmon UDO  
Archive Appliance for  
Medical Image Archiving.*



*"The Archive  
Appliance was the  
only solution that met  
all requirements --  
HIPAA compliance,  
security, fast access,  
longevity and cost."*

Sanjay Shah,

CIO (Chief Information Officer)

Cabell Huntington Hospital

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## The Solution

CHH's radiology group, which is separate from the hospital and also works with a cross-town competing center, requested that a GE Healthcare PACS (Picture Archiving Communication System) be installed for increased productivity and ease-of-use. In late 2005, CHH consulted with GE Healthcare about its system and the storage archive options available. With guidance from the radiology group, CHH made a decision to deploy a Centricity® PACS system from GE Healthcare.



CHH decided to implement a three-tiered storage strategy. For primary storage, CHH already had a SAN (storage area network) environment. For archiving and back-up, three Centricity-supported options were considered: Plasmon UDO (Ultra Density Optical) Archive Appliance, DVD media, and EMC Centera®. The EMC Centera was quickly dismissed because of price and data longevity issues. CHH's need to keep prenatal and pediatric records for more than two decades made the Centera system, which stores all active and inactive data on-line, an undesirable option for long-term archival storage. They also looked at DVD media, but it could not match the shelf life of UDO.

After researching the options, CHH selected an archival solution that would provide the longevity, authenticity, and performance necessary for the high volume of critical images they were required to store. The solution included a GE Healthcare PACS and a Plasmon UDO Archive Appliance (AA438) as the final piece of their three-tier storage system. Total cost of ownership, longevity and scalability were the key factors in the decision. Additionally, CHH had been using optical storage for years in the business office and medical records, and felt comfortable with the technology.

CHH's three-tier PACS system facilitates the hospital's ability to meet HIPAA requirements and EMR integration. On a daily basis, the Centricity PACS uploads images from CR, CT and PET-CT scans, as well as those from ultrasounds, nuclear medicine and digital mammograms. The system confirms the images, then saves them directly to the PACS servers. The Centricity PACS creates an information flow that provides clinicians with a seamless view of patient data across multiple sites with real-time accessibility.

At the same time images are loaded on to the Centricity PACS, they are written onto the second and third storage tiers as well. The second-tier EMC Clarion 600® with 7TB/s of capacity maintains images for up to two years. After two years, images can be erased from the Clarion, but archived for up to 50 years or longer on the Plasmon UDO Archive Appliance, which will also make images available for back-up and disaster recovery.

“The transition from storing film to digital images required a tiered storage approach,” said Sanjay Shah, CHH CIO. “The UDO Archive Appliance was the only solution that met all requirements -- HIPAA compliance, security, fast access, longevity and cost.”

## Conclusion

For CHH personnel, the Plasmon UDO Archive Appliance library has freed up physical space, cut the amount of time spent in the archiving process and allowed easier archive access to both doctors within CHH and their radiology group. Performing the number of exams they do per year with the increasingly advanced imaging equipment on the market, CHH now finds itself much better prepared to meet their long-term storage goals and in a much better position to handle potential disaster recovery scenarios.

