



Hospital enhances care with cloud-based image archiving

Good Samaritan Hospital deploys a hybrid cloud for image storage and archiving, speeding retrieval times, improving care decisions and lowering overall storage costs



Customer profile



Company	Good Samaritan Hospital
Industry	Healthcare
Country	United States
Employees	1,500
Website	www.goodsam.org

Business need

Good Samaritan Hospital needed a future-ready solution for storage and archiving that could provide faster access to clinical images and enhance patient care, while reducing overall storage costs.

Solution

The hospital chose to deploy Dell™ Unified Clinical Archive, which combines on-site storage and cloud-based archiving to deliver the ideal mix of performance and cost-effectiveness.

Benefits

- Doctors enhance patient care with fast, automated image retrieval
- Hospital lowers image storage and archiving costs
- Good Samaritan Hospital builds a strong disaster-recovery strategy
- Cloud-based solution supports future imaging requirements
- IT staff focuses on supporting doctors and patients
- Hospital maximizes systems availability with Dell support

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Good Samaritan Hospital*

To deliver the best possible care for patients, clinicians need fast access to the results of radiology and cardiology imaging studies. Exams both past and present must be available to provide context to current and pre-existing health issues in order to avoid duplicate tests, and to ensure the most effective diagnosis and treatment.

Good Samaritan Hospital, a world-class hospital and academic medical center, has accomplished this goal. Located in Los Angeles, it is affiliated with both USC and UCLA Schools of Medicine and it offers state-of-the-art diagnostic, surgical and therapeutic care. Good Samaritan Hospital has 408 licensed beds, admits some 17,000 patients each year and handles more than 93,500 outpatient visits. More than 4,000 deliveries and 8,000 surgeries are performed at the hospital annually.

In 2006, Good Samaritan Hospital implemented a picture archiving and communication system (PACS) from McKesson for sharing medical images electronically. It also required a reliable, cost-effective solution for image storage and archiving. Due to the high costs of building and managing in-house storage infrastructure, Good Samaritan Hospital decided in 2007 to outsource storage requirements to InSite One, a specialist provider of cloud-based medical imaging solutions. Bill Cotti, PACS administrator at Good Samaritan Hospital, says, “We didn’t have the skills or resources in the IT department to take on high-volume image storage in-house. It would have been too complex and costly to buy, configure and support the required hardware and to build in the redundancy and disaster recovery provision we needed in the time frame required for implementation.”

Hospital deploys latest-generation image storage and archiving solution

In 2013, the hospital’s image archiving contract came up for renewal. By this

time, Dell had acquired InSite One. The hospital initiated negotiations with Dell for a next-generation archiving solution with enhanced security and data protection using cloud technology. Key requirements for the hospital were faster image retrieval and lower overall storage and archiving costs. Good Samaritan Hospital also wanted to retain the strategic freedom to replace its imaging applications in the future as needed.

During the negotiations, Dell proposed its Unified Clinical Archive (UCA) solution deployed as a hybrid cloud using the Dell™ Cloud Clinical Archive. The solution delivers archiving-as-a-service using an on-site Dell Compellent storage array and an off-site cloud-based archive — all managed by Dell under a one-time, fee-per-study pricing model.

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Software

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Compellent provides rapid access to cached patient images from the last three years, reducing the time needed to access critical patient records and helping doctors’ make better, faster treatment decisions. At the same time, the cloud archive provides for cost-effective, long-term storage for older and less-frequently accessed images, with reliable disaster recovery and support for multiple healthcare applications. “We quickly understood the power of UCA, which promised a huge uplift in image retrieval performance and storage capacity,” says Cotti. “In addition, Dell supports the full range of healthcare applications, giving us the option to change software vendors in the future if our needs change.”

A Dell Deployment services team installed and configured the Compellent array and configured connections to the UCA cloud in just 24 hours. “Deployment was fast and issue-free, thanks to excellent support from the Dell team,” says Cotti.

Doctors enhance patient care with fast, automated image retrieval

Good Samaritan Hospital quickly saw the benefits of the new Dell UCA solution. It enables physicians to receive information in a timely way, enhancing the quality of care for patients and saving doctors valuable time. “Doctors want access to patient studies in seconds, even if the studies are extremely large and incorporate thousands of images,” says Cotti. “The Compellent on-site cache reduces retrieval time, and therefore doctors’ waiting time, from minutes to seconds. This not only helps doctors work productively and increases their satisfaction as end users, but it also ultimately increases the speed and quality of care for our patients.”

To save additional time, Good Samaritan Hospital is automating the retrieval of historical images using “pre-fetching” capabilities available in Dell UCA. “To make the best, most timely treatment decisions, referring physicians,

radiologists and cardiologists need to compare patients’ historical test results with current tests,” says Cotti. “By retrieving patients’ historical test results automatically with pre-fetching, Dell UCA speeds up the process and saves time for our physicians.”

Hospital lowers image storage and archiving costs

When Good Samaritan Hospital’s contract came up for renewal, the hospital’s chief financial officer wanted to see an overall reduction in storage and archiving costs. “Like all hospitals, we have challenging budgetary constraints,” says Cotti. “Dell responded in a very positive way to our financial requirements, and was able to reduce our costs significantly compared with the last contract period. That made extending our contract with Dell a very easy handshake.”

The hospital is achieving major savings with Dell Compellent. “With its one-time, fee-per-study pricing model, Dell Compellent helps Good Samaritan Hospital maintain a standard of quality and dependability, while being able to keep a very reasonable cost for this storage, making it a win-win solution,” says Cotti.

Good Samaritan Hospital builds a strong disaster-recovery strategy

Los Angeles has a high risk of earthquakes and extreme weather, and Good Samaritan Hospital must have plans for protecting patients, staff and mission-critical IT systems in the event of a natural disaster. “Having all our patient data on-site would be very risky, to the point where it is not an option,” says Cotti. “With Dell UCA, our images are replicated to remote data centers in the cloud, which means we can continue delivering the best care for patients in case there’s a major disaster or IT outage.”

As an additional benefit, Dell UCA can replicate archived data to other data centers around the country if necessary.



"I remember when the entire East Coast lost power in a major storm. We were sure we would lose access to our image archive, which is hosted in a Dell data center on the East Coast," says Cotti. "Dell mirrored our archive to a working data center in Phoenix, Arizona, and we never had a minute's downtime."

In addition to protecting the hospital against natural disasters and other unplanned events, Dell UCA ensures that data is never corrupted due to technology failures. "We have protection against technology faults as well as natural disasters with Dell UCA, which automatically checks the digital signatures of all stored images every 90 days. This maintains the integrity of the data regardless of its age," says Cotti.

Hospital protects critical operational and patient data

The hospital must ensure that critical patient data is constantly protected to achieve compliance with key healthcare regulations. This is much easier with Dell UCA, which offers a range of built-in security features. "The Dell cloud is certified as compliant with ISO 13485 quality-management standards typically required for medical devices," says Cotti. "In addition, we get access to real-time security monitoring and auditing technology from Dell SecureWorks as an integrated element of the UCA managed service, and at no extra cost. With Dell and Dell SecureWorks, we have peace of mind that our operational and customer data is properly protected at all times."

Cloud-based solution supports new imaging requirements

Good Samaritan Hospital is in the process of building a women's center, which will incorporate a state-of-the-art medical imaging facility. "When the new women's center is up and running, we expect to see a major increase in our image storage and archiving requirements," says Cotti. "With Dell UCA, we can expand our archive footprint easily with no capital costs, and no need to maintain and support storage infrastructure in-house."

IT staff focus on supporting doctors and patients

The Good Samaritan Hospital technical team now focuses all its time and energy on optimizing the hospital's PACS environment to enhance the quality of care. "Our UCA contract makes Dell responsible for the entire image storage and archiving infrastructure, which means we can focus on more value-added work that directly benefits patients," says Cotti. "If infrastructure needs to be upgraded, Dell calls us and schedules a day to do the work. It's a completely hands-off experience for us."

Dell UCA provides a platform for technology innovation

Good Samaritan Hospital is providing information-driven healthcare with Dell UCA, positioning the hospital as a medical technology leader. "As we move forward, we want to introduce new technologies that enhance patient care," says Cotti. "With Dell UCA, we have the

option to deploy a wide range of new features from Dell partners — from tools that enable physicians to securely view patients' images on their mobile devices to applications that enable image sharing and referral management. And because they are from Dell partners, we can be sure that they will integrate seamlessly with our PACS, perform well within our Dell infrastructure, and deliver excellent returns on investment for the hospital."

Good Samaritan Hospital maximizes systems availability with Dell support

Image storage and archiving is a mission-critical function at Good Samaritan Hospital, so systems support is critical. "One of the biggest benefits of the Dell solution is the great response I get from the Dell support line," says Cotti. "I don't need to call much, but when we can't find or retrieve an image, Dell fixes the problem for us immediately."

The technical team is also impressed with the Dell Compellent Copilot Support team that looks after the on-site Compellent storage array. "If a drive goes down or we have another problem, a Dell engineer will come out straight away," says Cotti. "We knew we would get great support with Dell, but the Copilot team has far exceeded our expectations."

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