

## lifeIMAGE utilizes Akamai's cloud delivery platform to quickly and reliably deliver DICOM images to clinicians to reduce cost and risk, and maximize patient care



### The Situation

lifeIMAGE is a patient-centered network management company that simplifies the exchange of medical images from discs, enables the sending and receiving of exams and associated clinical information electronically across institutions, integrates outside images with local systems, and engages patients to take control of their prior exams. The company works with more than 1,400 hospitals in the United States, and has more than 500,000 clinical touch points globally. Their solution focuses on improving access to clinical information to maximize patient care while reducing costs for service providers. Access and awareness of patients' medical imaging histories are vital for physicians, and the quality of patient care is improved by clinicians sharing imaging information and collaborating in real time. lifeIMAGE has created a solution with a universal viewer that eliminates traditional reviewing issues, reduces the cost of care by avoiding duplicate exams, and improves patient care by reducing exposure to excessive radiation. Together these elements of their solution lead to more timely decisions to maximize the care clinicians can provide to their patients.

### The Challenge

lifeIMAGE manages a network that exchanges medical images and related clinical information via a transactional system. The key benefit of their solution is eliminating risk. For lifeIMAGE, risk is introduced by latency and availability challenges. To maximize patient care and cut costs for clinicians, images must be delivered quickly and reliably. In order to eliminate risk, lifeIMAGE had considered pursuing the traditional strategy of building out data center space and additional server capacity to maximize quality of service. But for lifeIMAGE CTO Janak Joshi, the traditional data center approach was expensive, risky, and would not scale to meet the growth plans that the lifeIMAGE team had set for themselves.

Medical imagery uses a proprietary format that follows the Digital Imaging and Communications in Medicine (DICOM) standard for storing and transmitting medical images. DICOM files can be exchanged between two entities that are capable of receiving image and patient data in that format, using TCP/IP to communicate between systems. A single transaction to communicate a computed tomography (CT) scan will include 800 to 8,000 DICOM images that cannot be compressed, per the standard and in accordance with federal rules to maintain the diagnostic quality of the image. This results in anywhere from a 500KB to a 15GB transaction, which presents ample opportunities for latency and errors in communication.

## lifeIMAGE®

#### COMPANY

lifeIMAGE  
Newton, Massachusetts  
[www.lifeimage.com](http://www.lifeimage.com)

#### INDUSTRY

Healthcare and life sciences

#### SOLUTIONS

- Akamai Intelligent Platform™
- IP Application Accelerator (IPA)

#### KEY IMPACTS

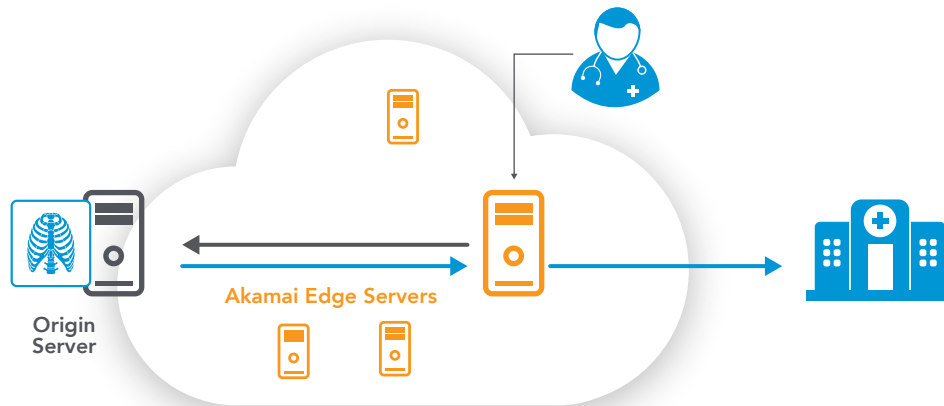
- Reduced CAPEX cost and increased scalability by leveraging Akamai's cloud delivery platform
- Decreased latency by bringing the DICOM standard images closer to clinicians
- Maximized patient care and reduced costs by increasing accessibility of clinical information
- Realized 14% improvement in transaction time of DICOM images

“ We leveraged Akamai's cloud delivery platform to deliver DICOM images to clinicians quickly and reliably. This resulted in a 14% improvement in transaction times.

— **Janak Joshi**, Sr. Vice President & Chief Technology Officer - lifeIMAGE

## The Solution

The lifeIMAGE team approached Akamai to complement their existing data center strategy with Akamai's IPA technology. To ensure that DICOM images could be transmitted quickly and reliably, the team looked to Akamai as the recognized largest and most trusted cloud delivery platform to reduce latency by bringing images closer to clinicians, and ensure that every transaction would be delivered quickly and reliably. This enabled the lifeIMAGE team to reduce CAPEX costs, maximize the quality of service and achieve the scale needed to meet their aggressive growth plans. Since implementing Akamai solutions, the team has realized up to a 14% improvement in transaction times.



As the world's largest and most trusted cloud delivery platform, Akamai makes it easier for its customers to provide the best and most secure digital experiences on any device, anytime, anywhere. Akamai's massively distributed platform is unparalleled in scale with over 200,000 servers across 130 countries, giving customers superior performance and threat protection. Akamai's portfolio of web and mobile performance, cloud security, enterprise access, and video delivery solutions are supported by exceptional customer service and 24/7 monitoring. To learn why the top financial institutions, e-commerce leaders, media & entertainment providers, and government organizations trust Akamai please visit [www.akamai.com](http://www.akamai.com), [blogs.akamai.com](http://blogs.akamai.com), or [@Akamai](https://twitter.com/Akamai) on Twitter. You can find our global contact information at [www.akamai.com/locations](http://www.akamai.com/locations). Published 01/18.