

Emergent Connect Brings Faster Patient Care and Operational Efficiency to Mobile Medical Imaging on AWS



Executive Summary

Emergent Connect developed a cloud-based imaging and billing system platform on AWS for mobile medical imaging companies. Emergent Connect is dedicated to leveraging technology to help healthcare companies increase efficiency and expedite patient care. The company uses Amazon EC2 instances to train, build, and run software, Amazon S3 to store and serve medical images, and Amazon RDS to store image metadata, billing, and patient-related data.

A Cloud-Based Platform Designed to Expedite Patient Care

[Emergent Connect](#) provides mobile medical imaging to patients who cannot leave a physical location. In contrast to hospitals or imaging centers, where imaging equipment is located onsite, mobile imaging transports the equipment to the patient, often in the patient's living quarters. "Many of our nursing home population require medical services that need to be administered onsite. Emergent Connect serves this growing need, which has been heightened by the COVID-19 pandemic," says John LoGioco, head of growth at Emergent Connect.

Mobile medical imaging presents significant challenges along the entire patient journey, from dispatching technicians, registering patients remotely, medical image acquisition, accurate billing, and securing timely image analysis by certified radiologists. These challenges often result in patients waiting for care longer than needed, errors in data management that manifest in billing, longer collection cycles, and delays in obtaining signed reports from medical professionals.

Emergent Connect was founded in 2011 to solve these challenges by supplying mobile medical image providers a complete platform to increase their efficiency and expedite patient care. "We had a dream to eliminate many of the common problem areas in the patient journey that imaging providers face," says Dean Vaughan, cofounder of Emergent Connect.

Emergent Connect recognized that building an end-to-end solution needed to be independent of local hardware requirements and available 24/7, 365 days a year via a web-based connection. "We knew upfront that the only architecture to deliver on this dream would be a cloud-based platform that could deliver speed, uptime, and flexibility," says Vaughan.

Choosing the Right Platform to Scale

Emergent Connect was built entirely on Amazon Web Services (AWS). More specifically, Emergent Connect uses Amazon Elastic Compute Cloud (Amazon EC2) instances to train, build, and run the software, Amazon Simple Storage Service (Amazon S3) to store and serve medical images, and Amazon Relational Database Service (Amazon RDS) to store image metadata as well as other billing and patient-related data. "Our mobile imaging clients rely on speed, flexibility, and 'always on' availability to operate, and running on the AWS backbone is critical for us to serve these needs," says LoGioco.

The Emergent Connect platform enables mobile medical imaging providers to receive an order, dispatch a technician, obtain the medical image, route the image to a radiologist, view and deliver the results, and bill for the service, all on one platform.

Emergent Connect decided to build its end-to-end solution on AWS because of the flexible tools related to security, design, and deployment, as well as ease of scaling and speed.

About Steel Valley Portable X-Ray Service



Steel Valley provides fast and accurate mobile x-ray, ultrasound, cardiac, and vascular services designed to keep nursing homes, assisted living facilities, and private home patients in-house while reducing readmission rates.

“Because we serve imaging providers across all segments—including mobile providers, imaging centers, and hospitals—data privacy and security are paramount. AWS has a clear commitment to supporting HIPAA (Health Insurance Portability and Accountability Act) eligibility in its services and ensuring that they can be used in compliance with GDPR (General Data Protection Regulation), which is a core reason we build on AWS,” says Mike Spears, cofounder of Emergent Connect.

Steel Valley Portable X-Ray Service is one of Ohio’s largest portable medical imaging companies. Steel Valley provides mobile x-ray, ultrasound, cardiac, and vascular services across the state. Before working with Emergent Connect, Steel Valley could only take orders manually over phone or via fax. With orders coming in manually, verifying patient and insurance information was time-consuming. Any human error along the process would manifest itself through delays or errors in billing and reimbursements. Manual processes also meant billing could only be executed bimonthly, thereby extending collection cycles and impacting cash flow.

Steel Valley was introduced to Emergent Connect in 2016. “Our goal was to connect with a partner who could help us evolve our workflow from more of a manual process to a digital, automated process,” says Tim Rothermel, operations manager at Steel Valley. “Once we met the team and saw the demo, we were excited to not only move to a more automated solution, but to also move to a 100 percent cloud-based workflow.”

Using Emergent Connect, Steel Valley expedited the process of verifying patient information, giving technicians more time to spend administering care onsite, and saving patients upwards of 30 minutes per visit. The company also streamlined the revenue collection cycle, moving from a manual process that could only be executed bimonthly to a cloud-based system that allows exams to be completed and billed daily, reducing billing collection cycles by as much as 40 percent and providing faster reimbursements on an ongoing basis, which has meaningful financial impact on the business.

Rothermel also reports significant efficiencies across the entire process of taking an order and then delivering both mobile images and a prompt diagnosis from a radiologist.

Organic Growth Velocity

Emergent Connect now serves over 2,000 customers and connects 80,000 individual facilities. Leveraging AWS enables the company to provide its customers numerous benefits, including increasing the capabilities of ordering and acquiring patient images by 50 percent and increasing time to patient care in the mobile imaging sector by 30 minutes or more.

Those efficiencies are critical, especially against the backdrop of the COVID-19 pandemic. LoGioco states, “More now than ever, an imaging system must allow for complete and instant flexibility for clinicians, administrators, and patients. Being 100 percent cloud-based and configurable, Emergent Connect is attractive to customers because of its simplicity, ease of use, and strategic confidence to navigate the new landscape. Since we architected the system on AWS, speed, efficiency, and flexibility are core elements of our DNA and are driving our exponential growth.”

About Emergent Connect

Emergent Connect provides cloud-based software solutions to the healthcare industry. The company developed a complete, cloud-based platform to help mobile medical imaging providers increase efficiency and expedite patient care.

