

GE Healthcare Launches Health Cloud on AWS, Improving Collaboration and Patient Outcomes

GE Healthcare aims to improve patient outcomes by reducing workflow processing time through sharing of medical image data across specialists and referring physicians. The organization manufactures and distributes diagnostic imaging equipment, as well as imaging agents and radiopharmaceuticals used in medical imaging procedures. GE Healthcare runs its GE Health Cloud, which will connect to 500,000 imaging devices, on AWS.

Seeking to Ease Healthcare Collaboration

[GE Healthcare](#) is known for its medical imaging equipment and diagnostic imaging agents, but has—over the last several years—continued in its digital transformation. “Every day, healthcare data flows through millions of medical devices, including more than 500,000 GE Healthcare medical imaging devices globally,” says Mitch Jackson, VP of Cloud Strategy and Technology for GE Healthcare Digital. “We want to increase customer value from device usage and data by enabling supplemental leverage of cloud compute, storage, and access.”

With faster access to healthcare data when and where clinicians need it, the GE Health Cloud can assist them in improving diagnoses and treatment. Survey data shows that up to 35 percent of patient cases are misdiagnosed, partially due to a lack of access to images, data, and records. Additionally, better interoperability between systems could save healthcare ecosystems \$30 billion per year, according to GE Healthcare.

The company launched the GE Health Cloud in the United States to provide radiologists and other healthcare professionals with a single portal to access enterprise imaging applications (e.g., PACS) to view, process, and easily share images and patient cases. Further GE Health Cloud offerings, both services and applications, are in the pipeline for release this year, ranging from device protocol management to care pathway analytics.

Creating New Business Opportunities

Jackson says, “Connectivity is the cornerstone of our digital strategy. We can create more value for customers by liberating data and applying machine learning to create smarter devices, new products, and entry into new markets. As AWS gets more recognition in this industry as a cloud provider, we can work with AWS to invite our shared customers onto the GE Health Cloud. Healthcare requires hybrid compute across devices, enterprise, and the cloud. The role of the cloud in healthcare will steadily increase across a variety of market segments, and many of our customers have already begun this transition.” These customers include both large and small hospitals, other healthcare organizations, and, increasingly, patients, all of which can benefit from the potential cost savings and operational improvements enabled by the GE Health Cloud.

GE Healthcare plans to expand its use of AWS services as it expands the GE Health Cloud. For instance, the company is taking advantage of Amazon SageMaker, a managed service for building, training, and deploying machine-learning models. “We are all-in on Amazon SageMaker for our deep-learning capabilities going forward,” says Andre Sublett, Health

Using AWS, GE Healthcare will enable customers to share and collaborate data from its fleet of medical imaging devices and PACS systems.



GE Healthcare

Company:	GE Healthcare
Industry:	Healthcare & Genomics
Country:	United States
Employees:	5,000
Website:	www3.gehealthcare.com/

About GE Healthcare

Headquartered in Chicago, Illinois, GE Healthcare manufactures and distributes diagnostic imaging equipment, as well as imaging agents and radiopharmaceuticals used in medical imaging procedures. Founded in 1994, GE Healthcare operates as a subsidiary of General Electric and has a presence in more than 100 countries.

Benefits

- Enables image data collaboration across primary care, specialists, and care settings
- Provides access and advanced visualization of imaging data
- Establishes an ecosystem for innovation and helping to deliver higher value to connected devices and specialty applications

AWS Services Used

- [Amazon Aurora](#)
- [Amazon S3](#)
- [Amazon EC2](#)
- [AWS Service Catalog](#)
- [Amazon Cognito](#)
- [Amazon SageMaker](#)

“By running the GE Health Cloud on AWS, we are able to collect, store, process, and provide access to data from a diverse and global set of medical devices starting with imaging. Healthcare providers can use our cloud apps to share this data and collaborate more easily.”

Andre Sublett, Health Cloud, Learning Factory, and Core Services Engineer, Healthcare Digital at GE

Cloud, Learning Factory, and Core Services engineer for Healthcare Digital at GE.

GE Healthcare will also continue leaning on AWS to help support the organization's digital transformation. “Our digital strategy is about improving connectivity, elasticity, and use of applied analytics,” says Jackson. “We want to establish a framework at a global scale to achieve these goals, and we can do that by running our GE Health Cloud on AWS.”

By helping its customers connect devices, GE Healthcare may also better support its mission of helping healthcare delivery organizations improve operational productivity and patient outcomes. Sublett says, “We wanted to start by making it easier for healthcare providers to collaborate in their decision making by orchestrating the sharing of medical image data within their organizations and with other stakeholders.”

Jackson adds, “Securely connecting systems and devices to the cloud was the best way to enable outreach and ultimately new insights into data from the scalability, flexibility, and lower cost of ownership it provides. Advancing medical outcomes requires processing large amounts of healthcare data with governed access to that data for research as well as clinical application. We believe the role of the cloud is pivotal to actualizing this vision.”

Creating the GE Health Cloud on AWS

To achieve its goal of enabling customers to extract value from data, GE Healthcare created the GE Health Cloud, a new solution based on the Amazon Web Services (AWS) Cloud. “We chose AWS for its breadth of services and commitment to making those services compliant with global health data regulations, which was key for us,” says Sublett.

The GE Health Cloud runs on Amazon Elastic Compute Cloud (Amazon EC2) instances. Close to 1 petabyte of medical imaging data is stored on Amazon Simple Storage Service (Amazon S3). “Amazon S3 is the cornerstone of our solution, and it gives us the durability and reliability we need for storing critical data,” Sublett says. The company relies on Amazon Aurora as its database service, and it uses the AWS Service Catalog to create and manage IT services. “Everything we deploy in the cloud is automated through the AWS Service Catalog,” remarks Sublett. GE Healthcare also takes advantage of Amazon Cognito for federated single sign-on to the Health Cloud for customers. “Using Amazon Cognito, our customers can continue to use their existing credentials and still access our health cloud apps.”

Jackson concludes, “Healthcare is a dynamic field, and we needed to get our solution up and running as fast as possible with scale. Using AWS, we gained the agility and flexibility to deploy hundreds of apps to multiple countries very quickly in the future.”