

U.S. Coast Guard Combats COVID-19 and Extends Healthcare Access with Virtual Care Platform

The growing COVID-19 pandemic made robust virtual care a necessity for the U.S. Coast Guard (USCG) and its more than 87,000 active personnel. In October 2020, the USCG met this critical need, operationalizing its Coast Guard Care Anywhere telehealth initiative with the deployment of the ViiMed enterprise virtual care platform.

“The health and safety of our Coast Guard service members is a top priority,” the USCG said in a statement. “Coast Guard Care Anywhere provides a critical link between our service members and medical professionals during a time when in-person visits may not be possible. Coast Guard Care Anywhere gives the service one more tool to ensure we’re doing everything we can to promote the health, readiness, and resiliency of our Coast Guard men and women.”

A primary goal of any virtual health initiative is to improve access to care. “USCG personnel and dependents, as well as their healthcare providers, are dispersed widely across the country. They needed a platform that can address these geographical challenges. ViiMed provides the ability to triage patients so they can be routed to the most appropriate provider, regardless of physical location,” said Brion Bennett, chief growth officer at ViiMed, an Amazon Web Services (AWS) ISV partner.

Serverless architecture enables rapid rollout

ViiMed operates its platform with AWS, using a serverless architecture on the AWS GovCloud (US). With serverless computing, AWS handles infrastructure management tasks, such as capacity provisioning and patching, as well as infrastructure security. AWS services used within the ViiMed platform include Amazon [Chime](#), [AWS CloudTrail](#), Amazon [CloudWatch](#), Elastic Container Registry ([Amazon ECR](#)), [Elastic Load Balancing](#), Amazon Elasticsearch Service ([Amazon ES](#)), [AWS Lambda](#), [Redis](#), Amazon Relational Database Service ([Amazon RDS](#)), Amazon Simple Email Service ([Amazon SES](#)), Amazon Simple Notification Service ([Amazon SNS](#)), Amazon Simple Storage Service ([Amazon S3](#)), Amazon Simple Queue Service ([Amazon SQS](#)), [AWS Systems Manager](#), and [AWS WAF](#).

ViiMed plans to add or transition to additional AWS services, such as [Amazon Aurora Serverless](#), [Amazon Alexa Health](#), [Amazon HealthLake](#), and [Amazon Transcribe](#).

“We want the most scalable and secure ecosystem available, and AWS serverless architecture and AWS GovCloud (US) help us achieve that,” said Phil Newman, chief executive officer and chief product officer at ViiMed. “AWS takes on the responsibility for the security and management of the infrastructure, and we focus on our implementation approach, software and releases, and the customer experience.”

The shift to serverless and AWS services fosters innovation

ViiMed had been planning to move to serverless architecture for several months when the COVID-19 pandemic made the shift an imperative for the company.

“We knew going serverless was going to be the best thing for us in the long term, but we would need to sideline several projects in order to make the shift. When COVID-19 hit, we knew we had to set that work aside and prepare for serious scale,” Newman said.

The company made the move in March 2020, and as a result, was able to reassign staff members from infrastructure work to development work, driving faster innovation. After the launch of the USCG platform, ViiMed was able to incorporate initial Coast Guard feedback within days. Before moving to serverless architecture, changes would have taken longer to implement, Newman noted. New platform capabilities and improvements are automatically available to the Coast Guard and all ViiMed customers.

“The transition to serverless architecture with AWS helped us drive innovation, lower costs, provide ironclad security, and improve scalability,” Newman said. “Just as important, it gave us the confidence to think even bigger and achieve our vision even faster.”

Virtual care platform goes live in less than 10 days

Under prime contractor MicroHealth, ViiMed, Iron Bow Technologies, and the USCG stood up the platform with a conditional authority to operate (ATO) less than 10 days after USCG awarded the contract on September 18. The first set of USCG healthcare providers enrolled on October 6.

“The Coast Guard needed and required us to be up and running—fast,” Newman said. “Thanks to the combination of the great work between our teams, our platform’s configuration layer and its lightweight serverless architecture within AWS GovCloud (US), we were able to accomplish the USCG’s objective.”

ViiMed’s unique workflow configuration layer and approach enabled quick deployment. Unlike point solutions that

address care for a specific condition, the ViiMed platform can help with any virtual care use case, including musculoskeletal health, chronic disease management and prevention, behavioral health, remote patient monitoring, and, in the USCG’s case, enterprise-wide telehealth.

“If you can envision a workflow for virtual care, you can configure it on the platform,” Newman said.

Serverless architecture enables speed, security, and better access to care

ViiMed operationalized its software entirely on AWS GovCloud (US), which manages and secures the infrastructure supporting the ViiMed platform. The Coast Guard inherits all of the AWS GovCloud security controls, which are standardized across the application stack. By eliminating operational overhead, serverless architecture users like ViiMed can build new releases quickly, get feedback, and iterate faster—securely.

“I like to think of AWS as ViiMed’s world-class infrastructure, network, and security team, which means ViiMed, the Coast Guard—and all ViiMed customers—have a world-class team supporting their virtual care visions,” Newman said. “With the security processes and certifications we inherit from the AWS GovCloud (US), ViiMed has a repeatable and highly scalable virtual care ecosystem for federal agencies and commercial customers.”

The combination of ViiMed’s configuration layer and AWS serverless architecture enables healthcare organizations to configure and deliver virtual care programs faster, improving access to care.

“On our platform, we’ve configured a collection of virtual care programs authored by some of the world’s best healthcare organizations,” Bennett said. “Patients worldwide will be able to access groundbreaking virtual care programs from anywhere, at any time, and on any device.”

400+ USCG providers and thousands of patients are enrolled on the ViiMed platform

The Coast Guard benefits from serverless architecture’s security and reliability, scalability, and ultimately, lower cost of delivery of the ViiMed platform. Because ViiMed pays only for the computing and storage capacity it uses,

it no longer needs to over provision for peak demands. AWS automatically optimizes and scales resources.

“We’re going to pass those pricing advantages on to the healthcare organizations using our platform, and ultimately, consumers of healthcare will pay less,” Bennett said.

More than 400 USCG healthcare providers are on the ViiMed platform, which the team deployed remotely due to COVID-19 precautions. To provide for successful adoption when onsite training was not possible, ViiMed developed a training inside of the platform. Providers learn how the platform works as they navigate their virtual care workflow.

This reinvented rollout helped patients and providers within the USCG maximize their use of the platform capabilities, which include scheduling, video-based appointments, screen sharing, and secure messaging. In cases where the patient’s need is urgent, a provider can initiate an appointment immediately.

USCG sets the new standard for virtual care

The USCG took a modern approach to the challenge of providing secure, robust virtual care, Newman observed.

“Many organizations believe they need to build custom solutions, which limit their ability to deploy and innovate rapidly,” he said. “With a cloud-based platform and inherited security controls, the USCG was able to deploy much more quickly than we typically see in industry. In fact, we believe the federal government is setting the standard for the next generation of virtual care. We’re honored that we have the opportunity to assist our women and men of the Coast Guard, and we will work incredibly hard to continuously improve their experience.”

