

Image Ingestion for AWS Health Imaging

Our vision is to inspire new possibilities for the health ecosystem with technology and human ingenuity. At CitiusTech, we constantly strive to solve the industry's greatest challenges with technology, creativity, and agility. Together with the world's leading Healthcare and Lifesciences organizations and our partners, we aim to accelerate the transition to a human-first, sustainable, and digital healthcare ecosystem.

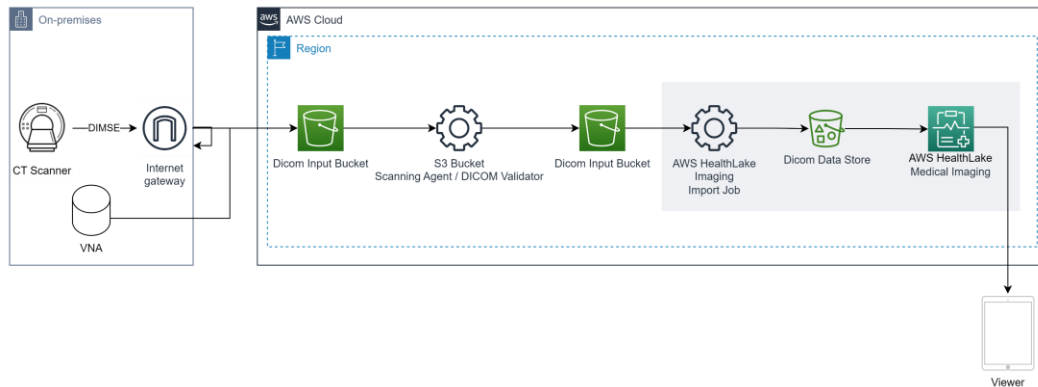
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Client Requirements

- Client is one of the leading providers of the Imaging diagnostics services across USCAN geography
- Client's requirement was to build a DICOM ingestion pipeline on AWS HealthLake Medical Imaging. The pipeline should scan uploaded images for virus/malware and validate if they are valid images before ingestion
- Ensure the pipeline's scalability, security, and performance while handling concurrent image uploads. Implement asynchronous processing, error handling, logging, and monitoring functionalities to optimize efficiency and user experience.

Solution Schematic



CitiusTech Solution

- CitiusTech designed a highly scalable ingestion pipeline using AWS Services such as Amazon S3 Bucket, ASG, EC2, Lambda, SQS, SNS, API Gateway and CloudFront
- The pipeline provides virus/malware scanning and DICOM image validation capabilities, ensuring that only clean and valid images are ingested into AWS HealthLake Medical Imaging
- Built-in monitoring functionality enables real-time tracking of image ingestion progress at each stage, ensuring efficiency and identifying potential issues promptly

Value Delivered:

- **Scalability & Performance:** The pipeline efficiently handles varying workloads with AWS Auto Scaling and asynchronous processing, ensuring optimal performance and reduced processing time.
- **Security & Data Integrity:** Virus scanning and image validation guarantee that only clean, valid images are ingested, safeguarding data integrity and protecting against security threats.
- **Real-time Monitoring:** The built-in monitoring system tracks ingestion progress, enabling proactive issue resolution and ensuring a reliable and efficient process.