

Influence Health Migrates their CRM and Marketing Platform from Azure to AWS with the Help of ClearScale



Business Challenge

Influence Health, now part of Healthgrades, provides an integrated suite of patient experience solutions to help healthcare systems and providers understand and better engage with consumers. Among the solutions, the company offers a robust customer relationship management (CRM) system and an easy-to-use digital marketing platform. Today the company provides these and other solutions to over 400 health systems and 1500 hospitals, as well as 18 of the top 20 pharmaceutical companies.

“Our partnership with AWS has been a great experience, and building atop AWS HIPAA-eligible services lets us leverage our software engineering investment towards building products and functionality for our customers versus managing infrastructure. ClearScale provided us the boost we needed to get our applications consolidated to AWS in a way that meets best practices around scalability, security, and availability.”

Rupen Patel, CTO of Influence Health

The Challenge

Influence Health’s team had been using Microsoft Azure services to host 90% of its platform and handle the various database management systems, stream-processing software platforms, search and analytics engines, and other components used to build the company’s solution suite. The remainder of its platform was on AWS where it ran non-Microsoft solutions such as MongoDB, PostgreSQL, Apache Spark, and Elasticsearch.

To ensure it could develop, enhance, and deliver powerful, data-driven solutions, the company wanted to migrate its CRM and digital marketing systems to a more flexible cloud service with a richer, more diverse set of tools.

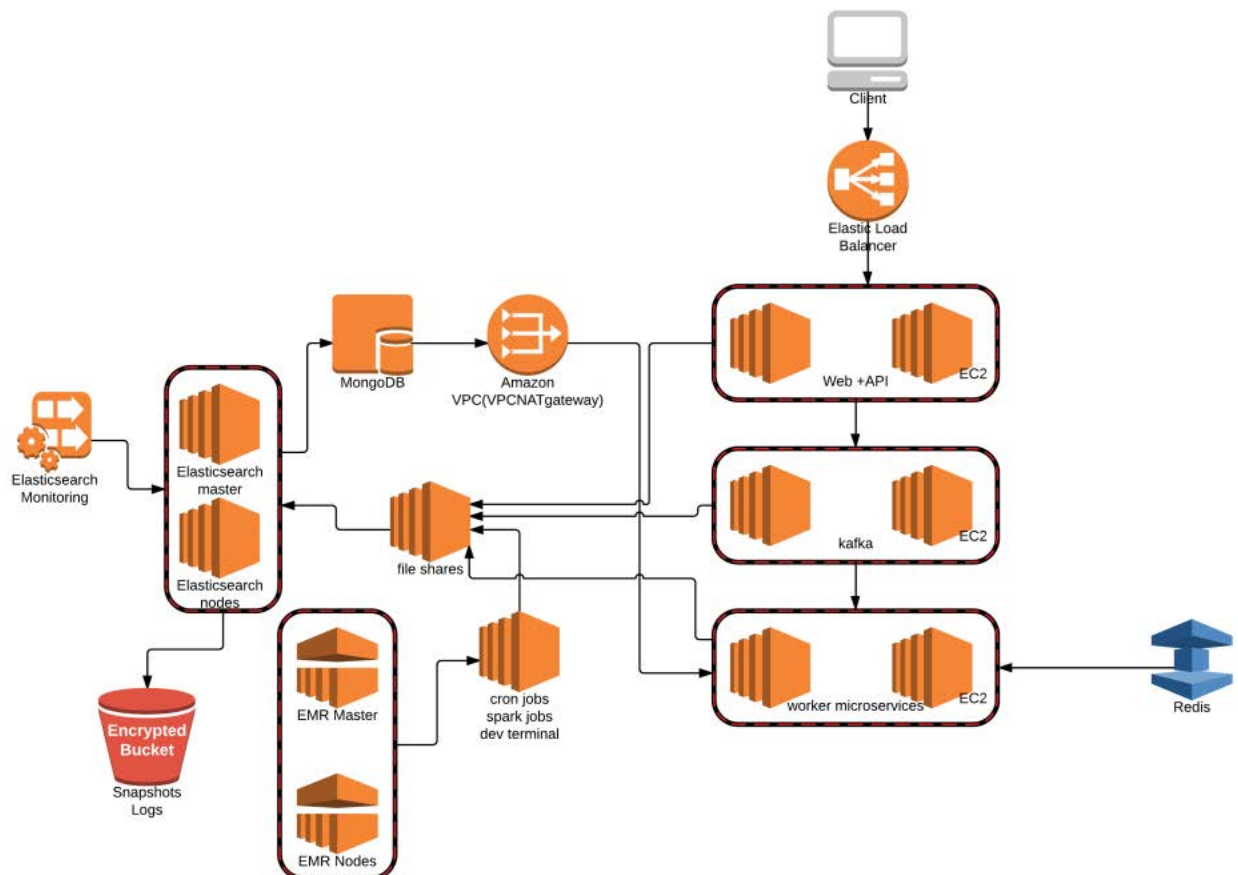
A new architecture design would be needed along with staging, production, and disaster recovery (DR) environments that could accommodate larger databases and automated data transformation and make use of new and emerging technologies. Because the systems could process protected health information (PHI), [the solution would need to meet the compliance requirements](#) of the Health Insurance Portability and Accountability Act (HIPAA). Scalability, high availability, and security were also must-haves.

As an AWS Premier Consulting Partner with broad experience in the healthcare industry and expertise in AWS services, automation, cloud migration, and other areas, ClearScale was well-positioned to craft and implement the solution Influence Health needed.

The ClearScale Solution

After gaining a full understanding of Influence Health's technical and business requirements, the ClearScale reviewed how data, including PHI, was handled across application workflows. Drawing on its AWS expertise, the team re-architected the flow of application data and PHI and migrated Influence Health's entire platform to AWS. AWS services were integrated that could best meet the company's needs.

An example of one of Influence Health's application tiers:

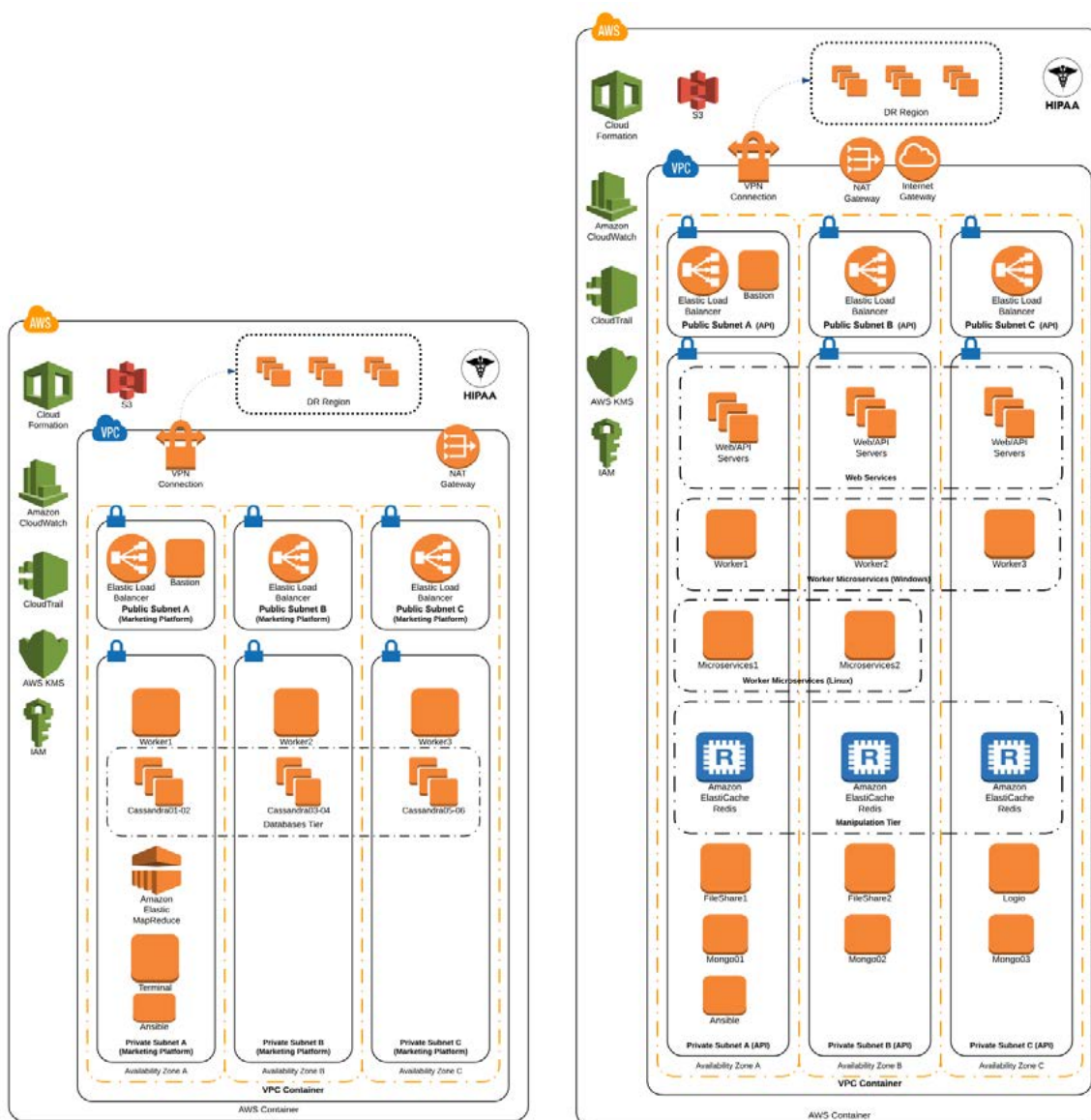


For example, the use of Amazon RDS for [PostgreSQL](#) simplified maintenance of PHI due to its HIPAA eligibility. The team also identified many system components that didn't store PHI and moved them to [Amazon Elastic Compute Cloud](#) (Amazon EC2) instances directly. Future work will include the use of [Amazon Elastic MapReduce](#) (EMR) and [Amazon ElastiCache](#), both managed services that remove the need to manage and maintain manually deployed instances.

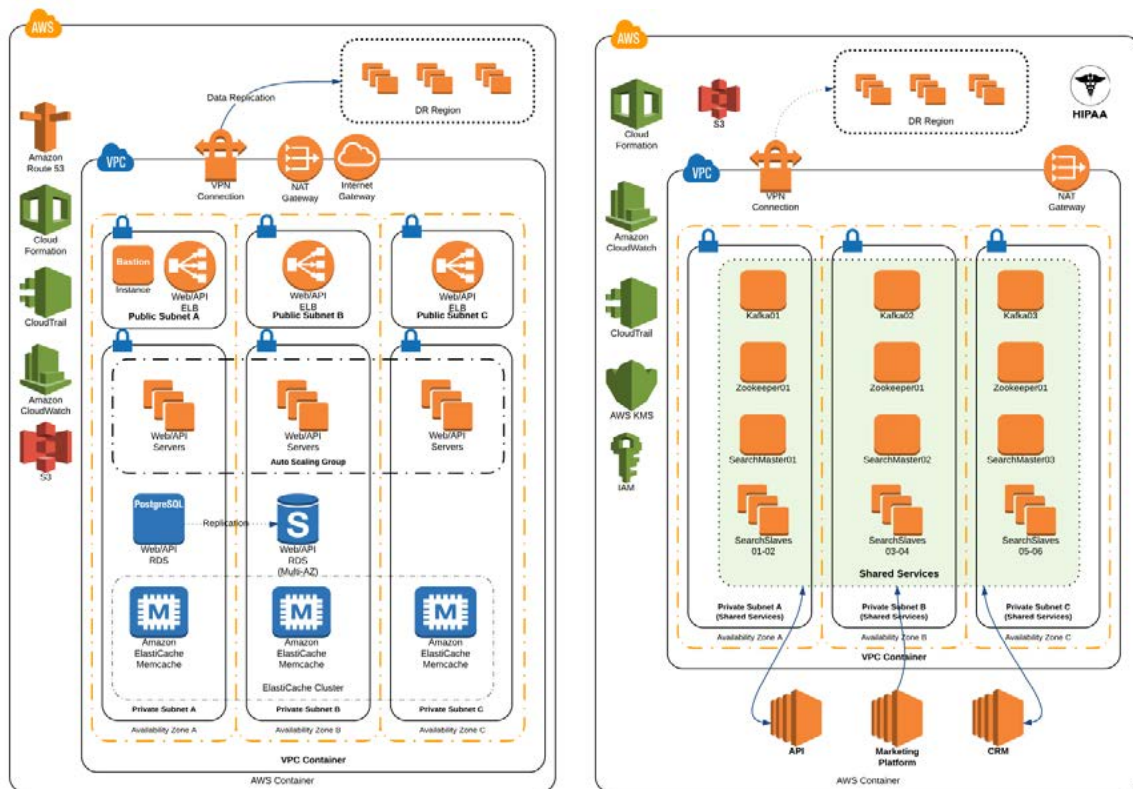
To meet HIPAA requirements for storing PHI, ClearScale used Filebeat and Logstash — tools that process and transform data — to ship logs to [Amazon Simple Storage](#) (S3) buckets that encrypt and then store all other data on encrypted EBS volumes.

The next step was automation. ClearScale automated the deployment of AWS managed services and other services that still needed to run on EC2 instances using [AWS CloudFormation](#), Ansible, and Docker. Clusters are created and scaled using a simple manual process.

Marketing Platform and API Diagram



CRM and Shared Services Diagrams



Once ClearScale completed the development of CloudFormation templates and Ansible playbooks, it deployed the staging, production, and DR environments. These were handed off to the Influence Health team as they were completed.

To maintain and meet the high availability and security standards of AWS, the new system was deployed between three Availability Zones with only necessary secured services in the public subnets and all other services stored in private subnets. AWS makes this simple with the use of managed services, VPC, NAT Gateway, VPC Peering, VPN Gateways, and Elastic Load Balancers.

Business Value

As a result of the project's successful implementation, Influence Health now can develop and roll out new functions and capabilities more quickly. To further support that effort, the company is also now leveraging a DevOps workflow. In addition, Influence Health plans to add new capabilities using AWS Lambda in conjunction with a container-based orchestration service that will support fully automated deployments and scalable Docker containers. The use of AWS's HIPAA-eligible services also helps ensure the company continues to meet its compliance requirements.