

“As a startup in the healthcare space, potential customers often ask about our security and architecture. Jacobian helps us win new business by providing diligence materials and participating in meetings with our prospects. They respect our business well and are the reason we’ve been able to grow”

Chris Johnson M.D
Chief Medical Officer

About Performance Clinical Systems

Time is one of the most valuable resources in a Healthcare organization. Lack of time often gets in the way of meeting an organization’s goals. Getting the right population health and care programs, optimizing staff resources and getting workflows right, take time. Performance Clinical Systems solves this problem by providing solutions that save time. PCS provides a cloud-based workflow platform which allows health systems to reimagine and accelerate any population health or care management program.

The Challenge

In 2014, PCS migrated its workloads from a co-location facility to AWS; building a single server environment with IIS and SQL Server. The company continued on steady growth path and reached a point where the single server environment could no longer support demand. Database responses were very slow, release cycle was manual and time consuming, and security services were outdated. The challenge was to build a larger, more efficient environment which leverages more HIPAA compliant AWS services.

Why Jacobian Engineering

Jacobian Engineering is an AWS Advanced Consulting Partner with many years of experience in providing solutions to Healthcare organizations. In collaboration with business and engineering teams at PCS, Jacobian Engineering proposed a solution that supported PCS’s demands, allowing the company to quickly scale and accommodate future business growth. In addition to being an AWS Consulting partner, Jacobian Engineering has a very strong background in helping organizations maintain or attain HIPAA compliance. This blend of expertise was very compelling to PCS.

The Result

In order to meet the demands of increasing load, DynamoDB was used for several important tables, which decreased load on SQL Server by over 40% and enabled the PCS scale elastically. Beanstalk was used to simplify and automate release cycle which was previously based on a proprietary orchestration tool called FinalBuilder Pro to Jenkins/Beanstalk. This has allowed the company to script unit testing and deployments from end to end. SNS, Cloudwatch and Guardduty round out the high availability and intrusion monitoring. Route53 provides automated maintenance pages when the sites are being updated or otherwise undergoing maintenance. And parameter store is used to store secure passwords used by scripts for various automation tasks. KMS of course manages keys for encryption of PHI data in S3, EBS, DynamoDB and RDS. SQS is used by a worker process system that formerly depended on the SQLdatabase and now has elastic scalability built.

