



OVERVIEW



FORTY TWO
North

Six Nines helped move 42 North, a Chicago-based medical technology startup, to a secure, modern cloud infrastructure on Amazon Web Services (AWS) and implement DevOps principles for efficiency and consistency. 42 North manages and deploys innovative, customized pharmaceutical commercialization strategies to help their clients increase patient access and facilitate economic and clinical efficiencies in the prescription fulfillment process.

CHALLENGES

42 North provides a service which validates pharmaceutical manufacturer coupons against rebates used at various pharmacies. Their solution mitigates errors, fraud, and other issues caused by using old or invalid rebate codes. This involves ingesting a large quantity of files, processing data and returning batches of reports to customers. As 42 North deals with Protected Health Information (PHI) data, they are required to follow HIPAA guidelines when managing, storing, and transmitting data. Following early success, the company has grown its customer base and found that their on-premises solution was inadequate to meet their forecasted demand.

SOLUTION

Six Nines engaged with 42 North in a detailed discovery process as the first part of their customer Cloud Adoption Framework. The discovery process is designed to gain an understanding of a customer's current platform requirements and dependencies as well as their future growth needs.

In the second phase of the project, Six Nines architected a HIPAA compliant solution utilizing two Availability Zones with multiple subnets each for network isolation, scalability, and availability. Additionally, some HIPAA-required elements were implemented including Amazon Elastic Compute Cloud (Amazon EC2) Dedicated Hosts running a Microsoft Operating System, Amazon Virtual Private Cloud (Amazon VPC) Flow Logs for Amazon VPC and Amazon CloudTrail for API logging. Using AWS CloudFormation templates, Six Nines automated the deployment of the environment.

Six Nines followed security best practices, including preventing direct access to 42 North's AWS resources by incorporating a bastion host in a public subnet with security group settings designed to allow access only to dedicated 42 North's locations. Production instances are deployed in a private subnet with a separate security group. The HIPAA instances, on dedicated hosts, were granted internet access via the NAT Gateway for connectivity to updates and third-party BI solutions.

AWS SERVICES USED

- Amazon EC2
- Amazon VPC
- AWS Identity & Access Management (IAM)
- AWS CloudFormation
- Amazon Simple Storage Service (Amazon S3)
- AWS CloudTrail
- AWS CodeCommit

SIX NINES EXPERTISE

- AWS DevOps Competency
- AWS Windows Workloads Competency
- HIPAA Compliance
- Security & Encryption
- Cloud Migration

RESULTS

42 North has finalized their production code base, and they are now running workloads on the deployed AWS infrastructure.

- **HIPAA Compliance:** The infrastructure was architected from the ground up to meet HIPAA compliance.
- **Performance:** The deployed architecture was optimized for running and finishing batch jobs in less than one hour to optimize AWS spend and deliver faster results.
- **Connectivity:** Network performance directly to their Business Intelligence solution is all within the AWS network, so latency is minimal compared to submitting large datasets over the Internet.
- **DevOps:** AWS CloudFormation templates provide a scripted framework to deploy and scale the environment while reducing or removing the likelihood of human error. AWS CloudTrail enables 42 North to provide proof of the security controls in place to satisfy HIPAA. AWS CodeCommit (Managed Git Repositories) provides a secure infrastructure code store.



Premier
Consulting
Partner

DevOps Competency

Microsoft Workloads
Competency

Solution Provider

WHY SIX NINES?

Six Nines IT is an AWS Partner Network (APN) Premier Consulting Partner and AWS Solution Provider specializing in helping businesses migrate to the cloud responsibly. A member of the APN since its inception, Six Nines has successfully migrated hundreds of customers across all industries to the cloud and offers an unparalleled combination of speed, agility, experience, and proprietary solutions to deliver accelerated solutions and a rapid time-to-value. The Oakland-based company combines old-school, on-premises IT roots together with deep expertise and a laser focus on all things AWS – including a core concentration on High Performance Computing and Microsoft Workloads (AWS Microsoft Workload Competency and AWS DevOps Competency) – to deliver bespoke solutions that are individually tailored to meet customers' unique needs throughout the cloud lifecycle.

