six nines
Cloud Responsibly™

AUTOMATING NRC HEALTH'S LEGACY MICROSOFT WORKLOADS ON AWS

DevOps DO

MICROSOFT WORKLOADS MW

OVERVIEW

nrc HEALTH

Six Nines helped successfully migrate NRC Health's legacy Microsoft application to the Amazon Web Services (AWS) cloud, including fully automating the company's entire CI/CD pipeline to launch new instances and provision existing instances with the latest builds, all while considering security and HIPAA compliance and honoring the AWS requirements for HIPAA applications in the cloud.

CHALLENGES

NRC Health (NASDAQ: NRCIA) – a provider of healthcare products and subscription-based analytics, program, and insight solutions in the U.S. and Canada – needed to move a 20-year-old Windows-based .NET and Microsoft SQL Server application to the cloud. The entire existing on-premises application had been built manually on a traditional hardware stack. The company wanted to build a complete infrastructure through code, automate Active Directory enrollment, and register their instances with Octopus servers. Once terminated, these machines needed to be cleaned up from the Active Directory and Octopus servers. In summary, NRC Health wanted a modern CI/CD pipeline for their software and their cloud environment, which required the AWS environment to be fully automated and adhere to strict HIPAA compliance requirements.

> *"Our largest roadblocks to modernizing revolved around audit requirements and AD authentication, ensuring that all services used are HIPAA compliant, and updating our code to more modern versions of our .NET and SQL within a tight timeline to help with our autoscaling capability."* – John Dorn, NRC Health

SOLUTION

Six Nines used TeamCity and Octopus to automate the deployment pipeline; when new instances are added to an environment, deployments of the project are completed automatically. Six Nines also used a single parameterized AWS CloudFormation template to build the Test, Staging, and Production environments and passed AWS user data scripts to the instance to process the Octopus agent registration and join the domain. To meet rigorous security and compliance requirements, all sensitive data and credentials are stored in the AWS Systems Manager parameter store and values are encrypted using the AWS Key Management Service. Additionally, all terminated instances are removed from the Active Directory domain and cleaned up with a custom AWS Lambda function.

AWS SERVICES USED

- Amazon Elastic Compute Cloud (EC2)
- Amazon Load Balancer
- AWS Auto Scaling
- AWS CloudFormation
- AWS Simple Storage Service (Amazon S3)
- AWS Systems Manager
- AWS Key Management Service (AWS KMS)
- Amazon CloudWatch Events
- AWS Lambda
- Amazon Cloud Directory

SIX NINES EXPERTISE

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

"Six Nines helped successfully migrate our very complex legacy Microsoft application to AWS, scaling features to ensure right-sizing as well as automating the entire CI/CD pipeline, including spinning up and down the underlying instances." – John Dorn, NRC Health

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aws partner network

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.

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