



# DevOps on AWS Case Study

## GenomeNext DevOps Process

### About GenomeNext



GenomeNext is a genomic informatics company dedicated to accelerating the promise and capability of predictive medicine and scientific discovery. It commercializes genomic analysis tools and integrated systems for the evaluation of genetic variation and function. The advanced informatics and data management solutions are designed to simplify, expedite and enhance genetic analysis workflows. GenomeNext solutions provide the market with genomic data and analysis at an unprecedented combination of performance, quality, cost and scale without requiring the investment in high-performance computing resources and specialized personnel. The proprietary platforms address a broad range of highly interconnected markets, including sequencing, genotyping, gene expression, and molecular diagnostics. GenomeNext customers include leading genomic research centers, academic institutions, government laboratories, and clinical research organizations, as well as pharmaceutical, biotechnology, agrigenomics, and consumer genomics companies.

### THE CHALLENGE

GenomeNext needed a more efficient way to develop and deploy application changes to its Amazon Web Services Genomics Cloud Platform while maintaining high level of security and compliance.

### THE SOLUTION

JHC Technology worked with GenomeNext to design efficient development and agile management process, setup internal DevOps software and AWS infrastructure components, mapped processes to appropriate security and compliance controls, integrated third party DevOps tools with GenomeNext Cloud platform, implemented development life cycle environments (Dev, QA, and Prod) on AWS, monitored and reduced AWS costs, and architecture high availability and disaster recovery. JHC Technology's solution enhanced GenomeNext's ability to quickly and securely roll out application development and infrastructure changes with minimal to zero downtime through the use of tools such as AWS Elastics Load Balancing, AWS CloudWatch, AWS CloudFormation, and AWS CodeDeploy.

### THE BENEFITS

#### Automation

GenomeNext recognized the advantages of DevOps automation by a significant increase in deployment frequencies, a dramatic decrease in deployment failures, immediate recovery of failed deployments, and reduction in the time required for changes.

#### Disaster Recovery

By combining AWS and DevOps, GenomeNext can automate the deployment of an exact copy of its Production solution within minutes into any AWS region, allowing it to meet its recovery time objectives.

#### Cost Savings

GenomeNext realized cost saving utilizing DevOps and AWS. Cost saving came in terms of maintaining a small staff, increased quality of products, reduction deployment complexity, and faster time to market. As an AWS preferred reseller, JHC Technology provides GenomeNext AWS infrastructure discounts.

### ABOUT JHC TECHNOLOGY, INC. AND AWS

JHC Technology provides core capabilities to clients utilizing AWS for enterprise and application architecture, migration, operations, DevOps, and automation of cloud environments.

Organizations using a DevOps model deliver applications quicker and innovate faster. AWS offers infrastructure resources designed to support continuous integration and delivery, infrastructure as code, microservices, and monitoring & logging.

### NEXT STEPS

To learn more about AWS and JHC Technology, Inc. visit [www.jhctechnology.com](http://www.jhctechnology.com)