



Shaping Healthcare Possibilities

## Success Story

# Building a scalable Microservices collab portal for Data Scientists: A DevOps approach

[www.citiustech.com](http://www.citiustech.com)

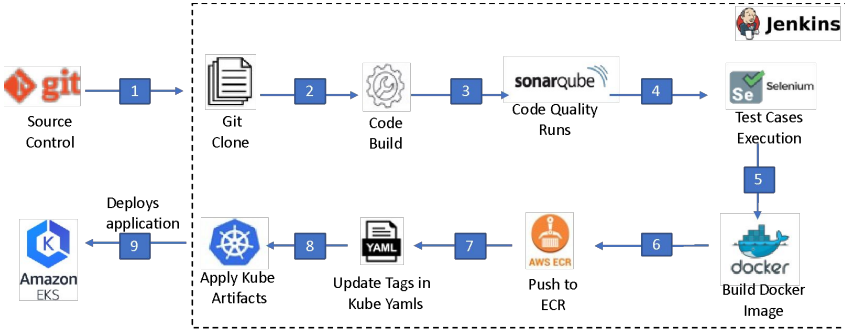
© 2024 CitiusTech | Private & Confidential



## The Challenge

A global biotechnology corporation wanted to build a collaboration portal for all in house data scientists engaged in multiple scientific project. The vision for the platform is to collaborate between data scientists, providers, governments, scientific communities and research communities and expose the research assets which are generated by the organization. DevOps architect's objective was to deploy a highly scalable & highly available data science microservices platform

## Solution Highlights



Splunk



AWS CloudFormation



Amazon API Gateway



kubernetes

## The Solution

- Created scalable CI/CD pipeline using **Jenkins, AWS EKS, AWS ECR, Kubernetes CLI, AWS Secret Key, Gitlab**
- For supporting microservices architecture created **docker compose** to build and run **multiple docker files and docker images respectively**
- Implemented **Kubernetes** yaml. resource file for Pods, Services, Deployments, etc. & leveraged **Kubectrl** to make API requests to the API Server within K8s Cluster
- Leveraged **Datadog** for monitoring and Splunk to collect logs
- Implemented **AWS CloudFormation** templates for infrastructure provisioning

## The Outcome

- Delivered CI/CD pipeline with Zero Downtime by using rolling update Deployment Strategy in K8s
- Achieved autoscaling by implementing Horizontal Pod Autoscaler (HPA) as part of K8s deployment pipeline
- Implemented Jenkins Job with interactive dropdowns to deploy only the selected components of the microservices based application



Shaping Healthcare Possibilities

# Thank You

CitiusTech - Shaping Healthcare Possibilities.

CitiusTech is a global IT services, consulting, and business solutions enterprise 100% focused on the healthcare and life sciences industry. We enable 140+ enterprises to build a human-first ecosystem that is efficient, effective, and equitable with deep domain expertise and next-gen technology.

With over 8,500 healthcare technology professionals worldwide, CitiusTech powers healthcare digital innovation, business transformation, and industry-wide convergence through next-generation technologies, solutions, and products

[www.citiustech.com](http://www.citiustech.com)

© 2024 CitiusTech | Private & Confidential

