Project Description

We have a Docker Compose project with the following three components:

1. Frontend
2. Backend Service
3. MongoDB

Project URL: https://github.com/knaopel/docker-frontend-backend-db

Objective

Deploy the above application to a Kubernetes environment using Helm chart packaging. Please create a CI/CD pipeline using either Jenkins or GitLab. We are interested in seeing your approach to integrating SAST in the pipeline and end to end fully automated pipeline. The application must be deployed using either a Rolling deployment or a Blue-Green deployment strategy.

Demonstration Requirements

During the demo, candidate will be asked to execute the CI/CD pipelines and run the application in Kubernetes. Once deployment is complete, we should be able to access the web interfaces through a web browser.

Bonus Points

Additional points will be awarded if candidate can incorporate one or more of the following use cases and scenarios into your demo:

1. CI/CD Pipeline Failure Scenario: Demonstrate a scenario where the CI/CD pipeline fails.
2. Short-Term Load Test: Include a short-term load test in the CI pipeline for the API endpoint "*http://{candidate-localhost}:3001/api/todos"*. The load test should run for 1-2 minutes with 100 hits per second, ensuring that the response time is less than 100ms
3. DAST tool integration
4. Use Terraform/CloudFormation/EKSCTL if cloud environment is chosen for demo.

Environment

You may conduct the demo on your own PC/laptop or use any cloud environment.

Demo Timeline

Candidate must be able to give demo within one week once he received the assignment.