

Application Deployment

(Deploy the given React application to a production ready state)

Application:

Clone the below mentioned repository and deploy the application (Run application in port 3000).

Repo URL : <https://github.com/Vennilavan12/Trend.git>

Docker:

- Dockerize the application by creating Dockerfile
- Build an application and check output using docker image.

Terraform:

- Define infrastructure in main.tf to create VPC, IAM, EC2 with Jenkins, etc.
- Use terraform command to provision infrastructure.

DockerHub:

- Create a DockerHub repository.

Kubernetes:

- Setup Kubernetes in AWS EKS and Confirm EKS cluster is running.
- Write deployment and service YAML files.
- Deploy using kubectl via Jenkins.

Version Control:

- Push the codebase to a Git provider (GitHub).
- Add gitignore and dockerignore files and use CLI commands to push code.

Jenkins:

- Install Jenkins and necessary plugins (Docker, Git, Kubernetes, Pipeline) for build, push & deploy applications.
- Setup Github and jenkins integration using github webhook build trigger for auto build for every commit.
- Create a declarative pipeline script and pipeline project to build, push & deploy using CI-CD.

Monitoring:

- Setup a monitoring system to check the health of the cluster or application (opensource) is highly appreciable.

Submission Guidelines:

- GitHub Link: Submit full code repository.
- README File: Include setup instructions, pipeline explanation, and screenshots or create a document and attach all screenshots.
- Application deployed kubernetes Loadbalancer ARN.