

1. CICD Pipeline

Problem Statement:

Implement a CICD Pipeline to deploy a front-end/backend of an application written in the choice of stack (Python, .NET, Angular, Node, etc.). Deployment should be targeted at any Kubernetes Engines managed on Cloud (AKS, EKS, GKE)

Requirements:

- Ensure CICD the best practices are followed for the stack which you have chosen
- Implement all stages necessary in an ideal CICD Pipeline
- Ability to deploy to any environment of choice with custom configuration

Tech stack

- Choose tech stack of your choice, example Jenkins/Azure DevOps, GitHub Actions, etc.
- Cloud – AWS, GCP, Azure

Impact

- Ready to use CICD Pipeline to deploy an application to a Kubernetes engine

1. Infrastructure-as-Code scripts

Problem Statement:

Implement IaC scripts (Infrastructure as Code) script for a Highly available Cloud infrastructure hosting a web application.

Requirements

- Infrastructure should have necessary services like VPC, Storage, Internet Gateway, Security Groups, WAF (Web Application Firewall), Compute, Load Balancing and monitoring enabled
- Should support multiple environments

Tech stack

- Choose tech stack of your choice – Terraform, Ansible, CloudFormation, Biceps, etc.
- Cloud – AWS, GCP, Azure

Impact

- Ready to use IaC scripts to deploy an application to a Cloud platform