eks-ci-cd.md 2024-11-22

## EKS CI/CD Workflow Using GitHub Actions

## **Prerequisites**

1. GitHub Account

Click GitHub for EKS CI/CD Workflow.

## Steps:

- 1. Create a GitHub repository.
- 2. Add your project files and folders to the repository.
- 3. Create .github folder in project directory.
- 4. Inside it, create a /workflows folder.
- 5. Create eks-ci-cd.yml file and store it in above-created .github/workflows directory.
- 6. Define the name and following map of env variables:
  - AWS REGION
  - ROLE\_TO\_ASSUME
  - ECR\_REGISTRY\_URI
  - ECR\_REPOSITORY\_NAME
  - ECR\_IMAGE\_TAG
  - EKS\_CLUSTER\_NAME
- 7. Define the on to set which events can cause the workflow to run.
- 8. Define the following actions to build & push i.e Continuous Integration (CI):
  - Checkout the repo
    - actions/checkout@v4
  - Configure the AWS credentials
    - aws-actions/configure-aws-credentials@v4
  - Login to Amazon ECR
    - aws-actions/amazon-ecr-login@v2
  - Build and push the image
    - docker/build-push-action@v5
- 9. Run the following to deploy the pod i.e **Continuous Deployment (CD)**:
  - Update the kube config
    - aws eks update-kubeconfig --name \${{ env.EKS\_CLUSTER\_NAME }} --region \${{ env.AWS\_REGION }}
  - Deploy to EKS
    - sed -i.bak "s|DOCKER\_IMAGE|\${{ env.ECR\_REGISTRY\_URI }}/\${{ env.ECR\_REPOSITORY\_NAME }}: \${{ env.ECR\_IMAGE\_TAG }}|g" ./kubernetes/app/deployment.yml && kubectl apply -f ./kubernetes/app/deployment.yml