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