

Infra setup

Prerequisites

Ensure the following tools are installed and configured:

- OS: Linux/macOS
- AWS Account
- AWS CLI (configured with necessary IAM user/role, region)
- Terraform (latest)

Setup Instructions

1. Clone the [repository](#) to your local system
2. Provision Infrastructure with Terraform
 - Navigate to /IaC directory from root folder
 - Initialize Terraform: `terraform init`
 - Review the execution plan: `terraform plan`
 - Apply changes: `terraform apply`

This should create the necessary infra needed to deploy and run our application

Application Deployment

Repository URL: <https://github.com/achyut92/bank-acc-devops>

Update the AWS variables/secrets

Go to Settings (from repository) -> Security (side menu) -> Secrets and variables -> Actions:

- Under Secrets, add new Repository secrets for `AWS_SECRET_ACCESS_KEY`
- Under Variables, add new Repository variables for `AWS_ACCESS_KEY_ID`

Update variables in Kubernetes files

There are few variables under /bank-app/k8s directory

- In secrets-sa.yml and deployment.yml, replace `<AWS_ACCOUNT_ID>` with the AWS Account ID
- In configmap.yml, replace `<aurora-endpoint-terraform-output>` with Aurora url endpoint displayed from running the terraform script

The repository is equipped with GitHub Actions workflow which would automatically start the build process upon a push or merge (via pull request) to the `main` branch. The workflow can be manually triggered (Run workflow) as well from [here](#).

Running locally

The application can be tested locally using the Docker environment.

- Make sure Docker is running
- Navigate to the /bank-app directory, where the `docker-compose.yml` file is present
- Run the command: `docker-compose up --build`
- The swagger page will be available at <http://localhost:8080/swagger-ui/index.html>

Accounts

POST

/api/accounts

Create an Account

GET

/api/accounts/{id}/balance

Check Account balance

Transactions

POST

/api/transactions/{accountId}/withdraw

Withdraw from account

POST

/api/transactions/{accountId}/deposit

Deposit to account

GET

/api/transactions/{accountId}

View account transactions