

Test Documentation

1. Prerequisites and setup steps

- Docker
- AWS CDK CLI
- DynamoDb
- Ec2
- AWS account

To **build** this app, run the following:

- `npm install -g aws-cdk`
- `cdk synth`

To **deploy** this app, you need to be in this example's root folder. Then run the following:

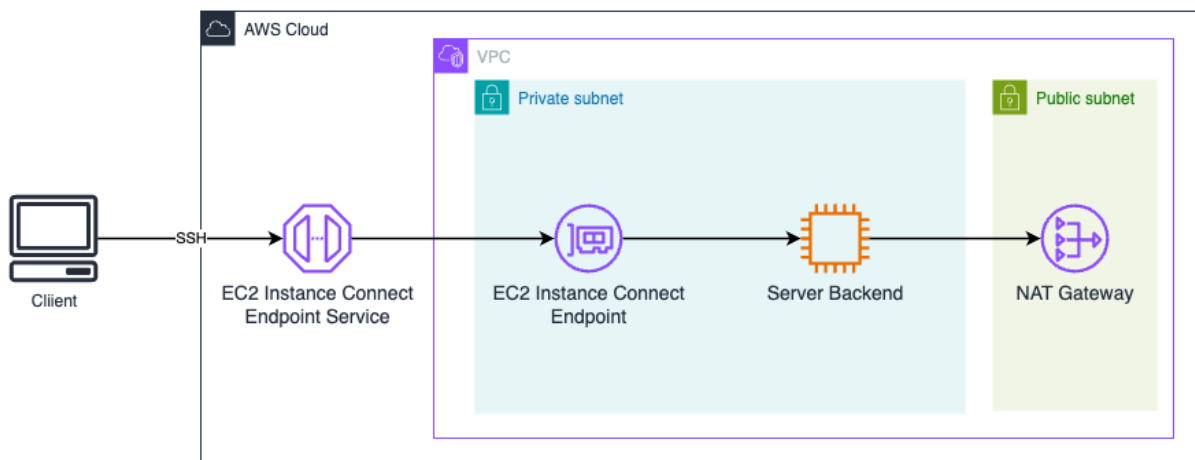
- `cdk bootstrap`
- `cdk deploy`

2. Deployment instructions

- We can run each project separately or through pipelines.
- Each project run can also be run manually
- Pipelines are automated process to get code from github and then run the project from root to all levels .. eg.. setting up infra, run code, test and deploy to target environments

3. Architecture explanation and reasoning

- Infra setup with VPC stack and regions. Deploy the Dynamodb in lambdas and get code invoke dynamodb for CRUD operations of products through API Gateway. Below is Architecture diagram at very high level



4. Known limitations and potential improvements.

- Security groups have been assigned but not enforced any security. Potential security features have to be implemented along with IAM.
- Another improvement is to make api and data secure as well so that we can integrate for more profuse use.

Concerns

- **Reproducibility:** Yes, we can successfully deploy from codebase and also documentation
- **Functionality:** Yes, this is designed as expected for across regions and environments
- **Architecture** Quality: Design is modular, can be made scalable (not implemented), and secure (Not implemented)
- **Code** Quality: CDK code is good and organized
- **Configuration** Management: We can modify settings for different environments and regions
- **Documentation:** Made notes to the best for this assessment.