

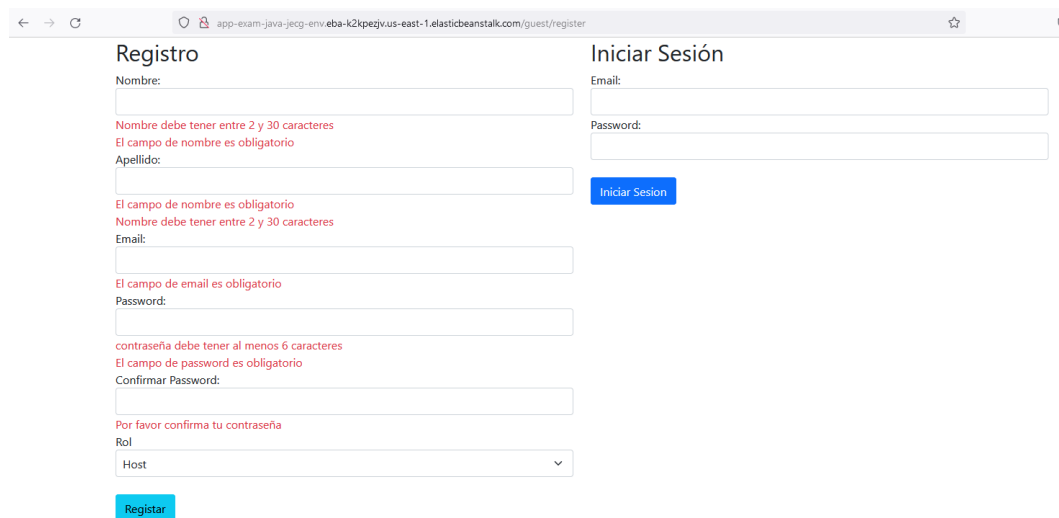
Examen Final DevOps

Por: Juan Esteban Calderón Gómez

I. Descripción de la actividad y resultados.

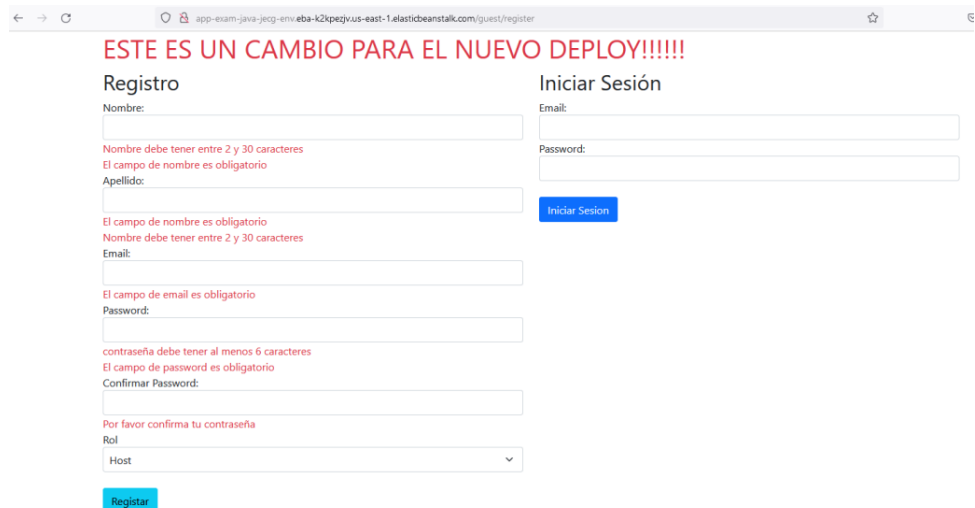
Se usó un ambiente de beanstalk con una plataforma Docker, posteriormente usando codebuild y code pipeline se realizó el despliegue de una aplicación java springboot usando un build Maven en .war

A continuación se presenta el resultado del despliegue inicial:



The screenshot shows a web browser window with the URL `app-exam-java-jecg-env-eba-k2kpejvus-east-1.elasticbeanstalk.com/guest/register`. The page has two main sections: "Registro" (Registration) on the left and "Iniciar Sesión" (Login) on the right. The registration form includes fields for "Nombre" (Name), "Apellido" (Last Name), "Email", "Password", and "Confirmar Password" (Confirm Password). Each field has a red error message below it: "Nombre debe tener entre 2 y 30 caracteres" and "El campo de nombre es obligatorio" for the name fields; "El campo de email es obligatorio" for the email field; "contraseña debe tener al menos 6 caracteres" and "El campo de password es obligatorio" for the password fields; and "Por favor confirma tu contraseña" for the confirm password field. There is also a "Rol" (Role) dropdown menu with "Host" selected. A blue "Registrar" button is at the bottom of the registration form. The login form has fields for "Email" and "Password" and a blue "Iniciar Sesión" button.

Luego de ejecutar nuevamente el pipeline, se obtuvo el siguiente resultado en la aplicación:



The screenshot shows the same web browser window as before, but with a large red message at the top: "ESTE ES UN CAMBIO PARA EL NUEVO DEPLOY!!!!!!". The registration and login forms are still visible below the message, with the same error messages and buttons as in the previous screenshot.

II. Detalle de las actividades realizadas.

i) Se realizó la inicialización de la instancia en beanstalk

Step 1: Configure environment

Edit

Environment information

Environment tier	Application name
Web server environment	app-exam-java-jecg
Environment name	Application code
App-exam-java-jecg-env	Sample application
Platform	
arn:aws:elasticbeanstalk:us-east-1::platform/Docker running on 64bit Amazon Linux 2/3.5.8	

Step 2: Configure service access

Edit

Service access [Info](#)

Configure the service role and EC2 instance profile that Elastic Beanstalk uses to manage your environment. Choose an EC2 key pair to securely log in to your EC2 instances.

Service role	EC2 instance profile
arn:aws:iam::127357951726:role/service-role/aws-elasticbeanstalk-service-role	aws-elasticbeanstalk-ec2-role

ii) Adicionalmente se inicializó el repositorio en ECR y se realizó el cargue de la imagen Docker con la aplicación springboot.

<input type="checkbox"/>	Repository name ▲	URI	Created at ▼	Tag immutability	Scan frequency	Encryption type	Pull through cache
<input type="checkbox"/>	exam-java-jecg	127357951726.dkr.ecr.us-east-1.amazonaws.com/exam-java-jecg	03 de junio de 2023, 10:20:08 (UTC-05)	Disabled	Manual	AES-256	Inactive

```
PS C:\Users\Esteban\Documents\GoogleDrive\Mi unidad\Courses\Bootcamp Java\DevOps\exam-devops-java> aws ecr get-login-pas
sword --region us-east-1 | docker login --username AWS --password-stdin 127357951726.dkr.ecr.us-east-1.amazonaws.com
Login Succeeded
PS C:\Users\Esteban\Documents\GoogleDrive\Mi unidad\Courses\Bootcamp Java\DevOps\exam-devops-java> docker build -t exam-
java-jecg .
[+] Building 0.5s (7/7) FINISHED
=> [internal] load build definition from Dockerfile                                0.0s
=> => transferring dockerfile: 192B                                              0.0s
=> [internal] load .dockerignore                                                  0.0s
=> => transferring context: 2B                                                    0.0s
=> [internal] load metadata for docker.io/library/openjdk:11-jdk-slim           0.0s
=> [internal] load build context                                                  0.3s
=> => transferring context: 44.74MB                                              0.3s
=> CACHED [1/2] FROM docker.io/library/openjdk:11-jdk-slim                     0.0s
=> [2/2] COPY /PoolProject-0.0.1-SNAPSHOT.war /PoolProject-0.0.1-SNAPSHOT.war  0.1s
=> exporting to image                                                            0.1s
=> => exporting layers                                                            0.1s
=> => writing image sha256:27ae9d6fd94e870ac7a1d681777c529c611e232c438b9dc3a38505aeba0d8003 0.0s
=> => naming to docker.io/library/exam-java-jecg                                0.0s
PS C:\Users\Esteban\Documents\GoogleDrive\Mi unidad\Courses\Bootcamp Java\DevOps\exam-devops-java> docker tag exam-
java-jecg:latest 127357951726.dkr.ecr.us-east-1.amazonaws.com/exam-java-jecg:latest
PS C:\Users\Esteban\Documents\GoogleDrive\Mi unidad\Courses\Bootcamp Java\DevOps\exam-devops-java> docker push 127357951
726.dkr.ecr.us-east-1.amazonaws.com/exam-java-jecg:latest
The push refers to repository [127357951726.dkr.ecr.us-east-1.amazonaws.com/exam-java-jecg]
15efc9805a57: Pushed
eb6ee5b9581f: Pushing [=====>] 51.94MB/338.3MB
eb6ee5b9581f: Pushed
eafe6e032dbd: Pushed
92a4e8a3140f: Pushing [=====>] 83.87MB
92a4e8a3140f: Pushed
latest: digest: sha256:3dc612a3ca0b2bc226d92459f49a1789b3e238fb2d2d44bab2829d70924fa29d size: 1372
PS C:\Users\Esteban\Documents\GoogleDrive\Mi unidad\Courses\Bootcamp Java\DevOps\exam-devops-java>
```

iii) Posteriormente se desplegó un repositorio en Codecommit y se realizó el primer commit.

Name	Description	Last modified	Clone URL
repo-exam-java-jecg	-	1 minute ago	HTTPS SSH HTTPS (GRC)

```
PS C:\Users\Esteban\Documents\GoogleDrive\Mi unidad\Courses\Bootcamp Java\DevOps\exam-devops-java> git init
Initialized empty Git repository in C:/Users/Esteban/Documents/GoogleDrive/Mi unidad/Courses/Bootcamp Java/DevOps/exam-d
evops-java/.git/
PS C:\Users\Esteban\Documents\GoogleDrive\Mi unidad\Courses\Bootcamp Java\DevOps\exam-devops-java> git remote add origin
codecommit::us-east-1://repo-exam-java-jecg
PS C:\Users\Esteban\Documents\GoogleDrive\Mi unidad\Courses\Bootcamp Java\DevOps\exam-devops-java> git add .
PS C:\Users\Esteban\Documents\GoogleDrive\Mi unidad\Courses\Bootcamp Java\DevOps\exam-devops-java> git commit -m "first
commit"
[master (root-commit) 9170b8d] first commit
3 files changed, 26 insertions(+)
create mode 100644 Dockerfile
create mode 100644 PoolProject-0.0.1-SNAPSHOT.war
create mode 100644 buildspec.yml
PS C:\Users\Esteban\Documents\GoogleDrive\Mi unidad\Courses\Bootcamp Java\DevOps\exam-devops-java> git push -u origin ma
in
error: src refspec main does not match any
error: failed to push some refs to 'codecommit::us-east-1://repo-exam-java-jecg'
PS C:\Users\Esteban\Documents\GoogleDrive\Mi unidad\Courses\Bootcamp Java\DevOps\exam-devops-java> git push -u origin ma
ster
Enumerating objects: 5, done.
Counting objects: 100% (5/5), done.
Delta compression using up to 12 threads
Compressing objects: 100% (5/5), done.
Writing objects: 100% (5/5), 38.40 MiB | 8.35 MiB/s, done.
Total 5 (delta 0), reused 0 (delta 0), pack-reused 0
remote: Validating objects: 100%
To codecommit::us-east-1://repo-exam-java-jecg
 * [new branch]      master -> master
branch 'master' set up to track 'origin/master'.
PS C:\Users\Esteban\Documents\GoogleDrive\Mi unidad\Courses\Bootcamp Java\DevOps\exam-devops-java> |
```

iv) Se creó la aplicación en codebuild.

codebuild-exam-java-jecg

A project name must be 2 to 255 characters. It can include the letters A-Z and a-z, the numbers 0-9, and the special characters - and _.

Description - optional

Build badge - optional

☐ Enable build badge

Enable concurrent build limit - optional

Limit the number of allowed concurrent builds for this project.

☐ Restrict number of concurrent builds this project can start

► Additional configuration

tags

Source

Add source

Source 1 - Primary

Source provider

AWS CodeCommit

Repository

repo-exam-java-jecg

Reference type

Choose the source version reference type that contains your source code.

Branch

Adicionalmente se agregaron las políticas que permiten al codebuild acceder a ECR

▼ Elastic Container Registry (6 actions)

▶ Service

Elastic Container Registry

▶ Actions

Read

BatchCheckLayerAvailability

GetAuthorizationToken

Write

CompleteLayerUpload

InitiateLayerUpload

PutImage

UploadLayerPart

▼ Resources

☐ Specific

☒ All resources

close

v) Construcción del pipeline y primera ejecución

The diagram illustrates the four steps of creating a pipeline in AWS CodePipeline:

- Step 1: Choose pipeline settings**
 - Pipeline settings**
 - Pipeline name: `pipeline-exa-java-jecg`
 - Artifact location: `codepipeline-us-east-1-277699381602`
 - Service role name: `AWSCodePipelineServiceRole-us-east-1-pipeline-exa-java-jecg`
- Step 2: Add source stage**
 - Source action provider**
 - Source action provider: `AWS CodeCommit`
 - RepositoryName: `repo-exam-java-jecg`
 - BranchName: `master`
- Step 3: Add build stage**
 - Build action provider**
 - Build action provider: `AWS CodeBuild`
 - ProjectName: `codebuild-exam-java-jecg`
- Step 4: Add deploy stage**
 - Deploy action provider**
 - Deploy action provider: `AWS Elastic Beanstalk`
 - ApplicationName: `app-exam-java-jecg`
 - EnvironmentName: `App-exam-java-jecg-env`

Teniendo el pipeline construido se realizó el primer despliegue usando pipeline

pipeline-exa-java-jecg

Source Succeeded
Pipeline execution ID: 9233f5b1-f749-4092-aa8d-289edad260f6

Source ⓘ

AWS CodeCommit

Succeeded - 4 minutes ago

9170b8de

9170b8de Source: first commit

Disable transition

Build Succeeded
Pipeline execution ID: 9233f5b1-f749-4092-aa8d-289edad260f6

Build ⓘ

AWS CodeBuild

Succeeded - 2 minutes ago

Details

9170b8de Source: first commit

Disable transition

Deploy Succeeded
Pipeline execution ID: 9233f5b1-f749-4092-aa8d-289edad260f6

Deploy ⓘ

AWS Elastic Beanstalk ↗

Succeeded - 1 minute ago

9170b8de Source: first commit

← → ↻

🔒 app-exam-java-jecg-env.eba-k2kpezjv.us-east-1.elasticbeanstalk.com/guest/register

☆

Registro

Nombre:

Nombre debe tener entre 2 y 30 caracteres

El campo de nombre es obligatorio

Apellido:

El campo de nombre es obligatorio

Nombre debe tener entre 2 y 30 caracteres

Email:

El campo de email es obligatorio

Password:

contraseña debe tener al menos 6 caracteres

El campo de password es obligatorio

Confirmar Password:

Por favor confirma tu contraseña

Rol

Host

Registrar

Iniciar Sesión

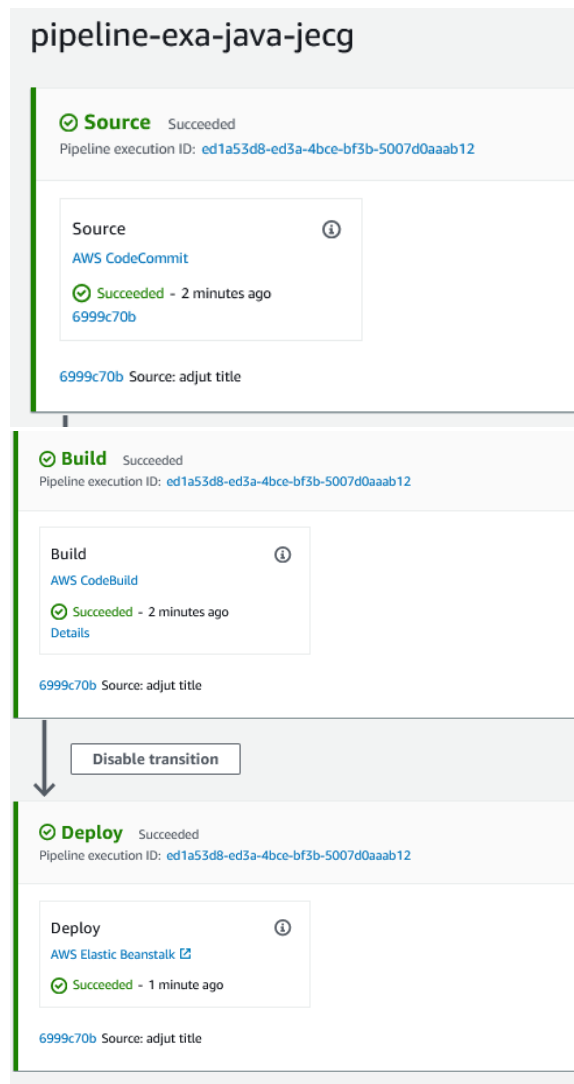
Email:

Password:

Iniciar Sesión

- vi) Posteriormente se realizó un commit con un cambio y se realizó un nuevo commit evidenciando el cambio en elastikbean

```
PS C:\Users\Esteban\Documents\GoogleDrive\Mi unidad\Courses\Bootcamp Java\DevOps\exam-devops-java> git add .
PS C:\Users\Esteban\Documents\GoogleDrive\Mi unidad\Courses\Bootcamp Java\DevOps\exam-devops-java> git commit -m "adjut
title"
[master 6999c70] adjut title
1 file changed, 0 insertions(+), 0 deletions(-)
PS C:\Users\Esteban\Documents\GoogleDrive\Mi unidad\Courses\Bootcamp Java\DevOps\exam-devops-java> git diff
PS C:\Users\Esteban\Documents\GoogleDrive\Mi unidad\Courses\Bootcamp Java\DevOps\exam-devops-java> git push -u origin ma
ster
Enumerating objects: 5, done.
Counting objects: 100% (5/5), done.
Delta compression using up to 12 threads
Compressing objects: 100% (3/3), done.
Writing objects: 100% (3/3), 3.64 KiB | 1.21 MiB/s, done.
Total 3 (delta 2), reused 0 (delta 0), pack-reused 0
remote: Validating objects: 100%
To codecommit::us-east-1://repo-exam-java-jecg
 9170b8d..6999c70  master -> master
branch 'master' set up to track 'origin/master'.
PS C:\Users\Esteban\Documents\GoogleDrive\Mi unidad\Courses\Bootcamp Java\DevOps\exam-devops-java> |
```



ESTE ES UN CAMBIO PARA EL NUEVO DEPLOY!!!!!!

Registro

Nombre:

Nombre debe tener entre 2 y 30 caracteres

El campo de nombre es obligatorio

Apellido:

El campo de nombre es obligatorio

Nombre debe tener entre 2 y 30 caracteres

Email:

El campo de email es obligatorio

Password:

contraseña debe tener al menos 6 caracteres

El campo de password es obligatorio

Confirmar Password:

Por favor confirma tu contraseña

Rol

Host



Registrar

Iniciar Sesión

Email:

Password:

Iniciar Sesión