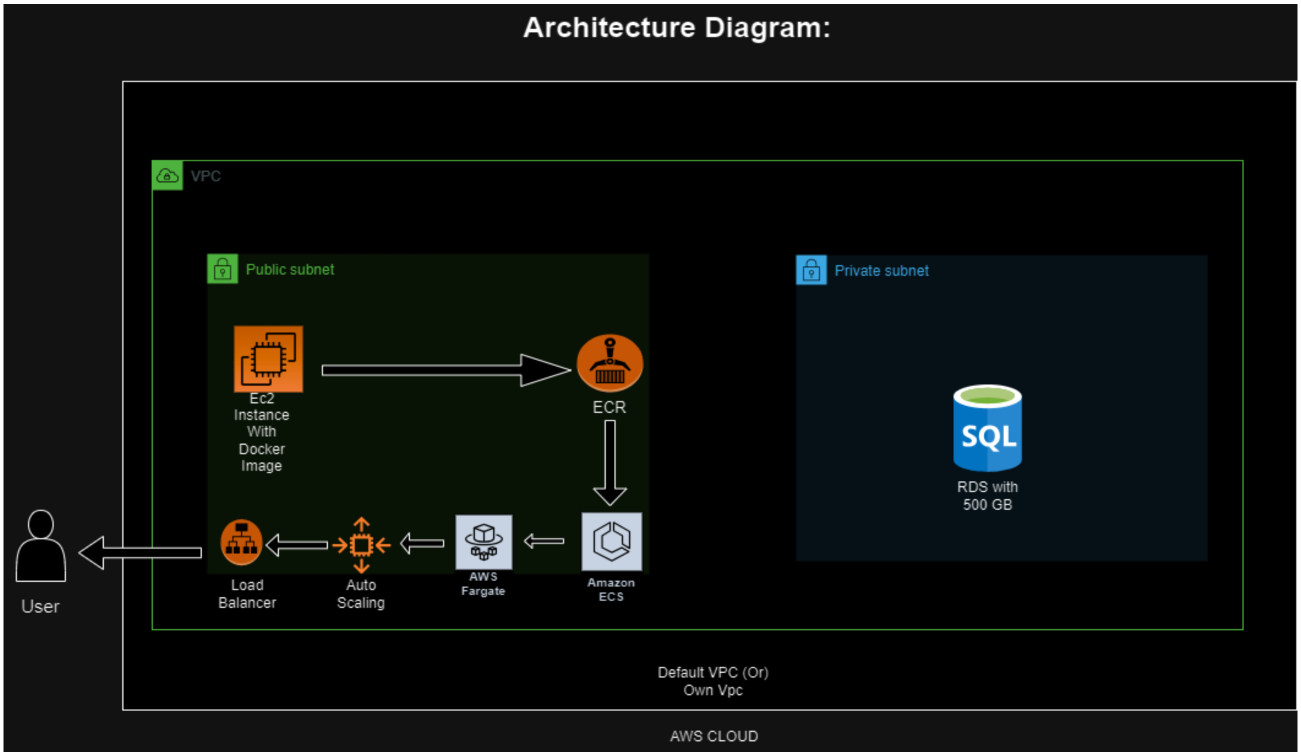
The Process of the project follows below Architecture:



Pre-Requirements:

- Ec2 Instance
- Aws-cli
- Docker

Step1:

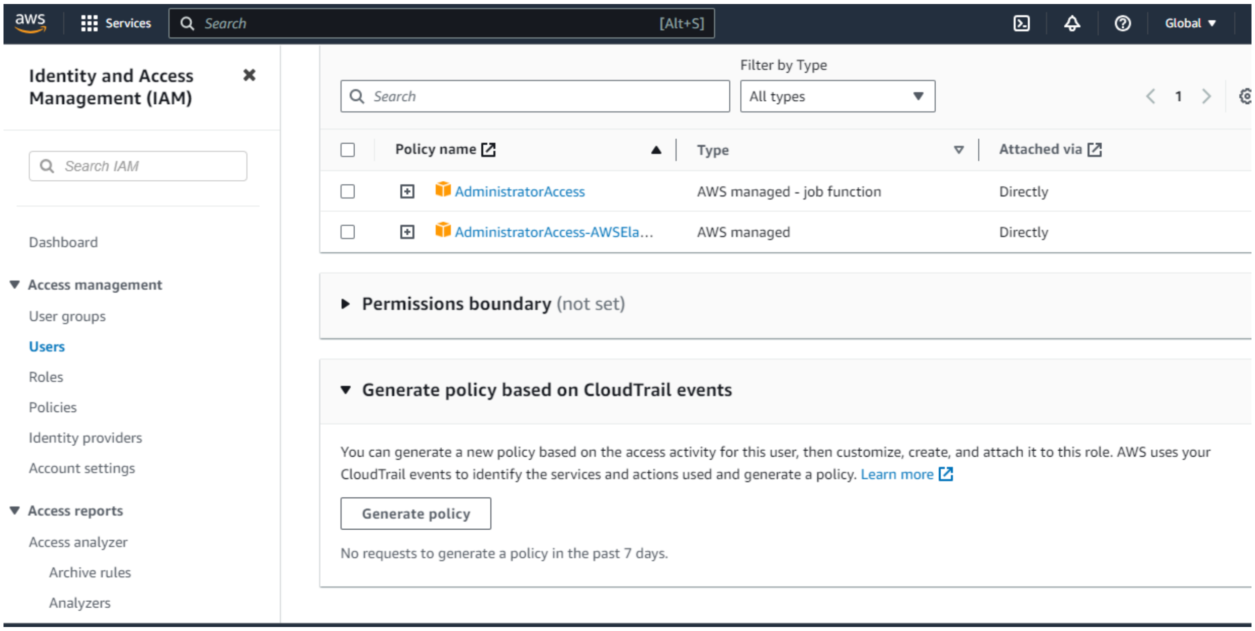
Create a role in AWS with the access of ec2 repository and admin access and create access key:

for further requirements example below.

Access key - AKIA43MM3UB4BSMWHP7D

Secret access key - vOWVw00aqv9Kca4G8NkQiWaEyim/Yd5H47XQ9GzX

Region - ap-northeast-1



□	Policy name	Type	Attached via
□	AdministratorAccess	AWS managed - job function	Directly
□	AdministratorAccess-AWSEla...	AWS managed	Directly

▸ **Permissions boundary** (not set)

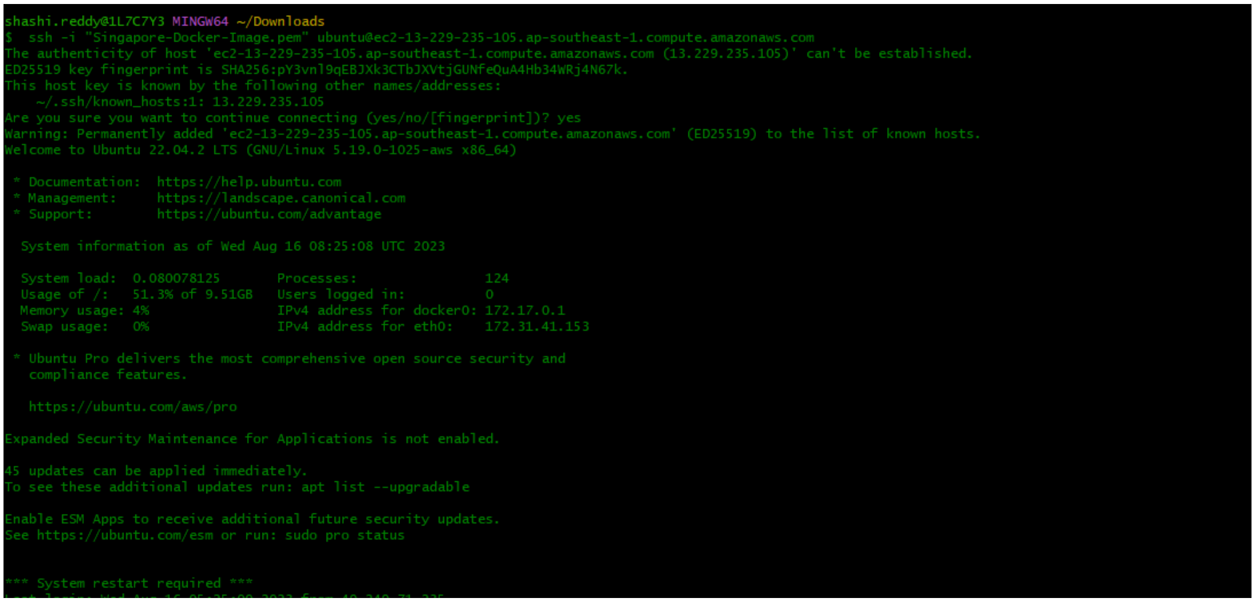
▾ **Generate policy based on CloudTrail events**

You can generate a new policy based on the access activity for this user, then customize, create, and attach it to this role. AWS uses your CloudTrail events to identify the services and actions used and generate a policy. Learn more

No requests to generate a policy in the past 7 days.

Step2: Creating the Elastic container repository in Linux:

- Create a Ec2 on ubuntu and login on git bash using the command
- ssh -i "Singapore-Docker-Image.pem" ubuntu@ec2-13-229-235-105.ap-southeast-1.compute.amazonaws.com



```
shashi.reddy@1L7C7Y3 MINGW64 ~/Downloads
$  ssh -i "Singapore-Docker-Image.pem" ubuntu@ec2-13-229-235-105.ap-southeast-1.compute.amazonaws.com
The authenticity of host 'ec2-13-229-235-105.ap-southeast-1.compute.amazonaws.com (13.229.235.105)' can't be established.
ED25519 key fingerprint is SHA256:pY3vnl9qEBJXk3CTbJXVtjGUNfeQuA4Hb34WRj4N67k.
This host key is known by the following other names/addresses:
    ~/.ssh/known_hosts:1: 13.229.235.105
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added 'ec2-13-229-235-105.ap-southeast-1.compute.amazonaws.com' (ED25519) to the list of known hosts.
Welcome to Ubuntu 22.04.2 LTS (GNU/Linux 5.19.0-1025-aws x86_64)

 * Documentation:  https://help.ubuntu.com
 * Management:     https://landscape.canonical.com
 * Support:        https://ubuntu.com/advantage

  System information as of Wed Aug 16 08:25:08 UTC 2023

  System load:  0.080078125       Processes:                124
  Usage of /:   51.3% of 9.51GB   Users logged in:          0
  Memory usage: 4%                IPv4 address for docker0: 172.17.0.1
  Swap usage:   0%                IPv4 address for eth0:    172.31.41.153

 * Ubuntu Pro delivers the most comprehensive open source security and
   compliance features.

   https://ubuntu.com/aws/pro

Expanded Security Maintenance for Applications is not enabled.

45 updates can be applied immediately.
To see these additional updates run: apt list --upgradable

Enable ESM Apps to receive additional future security updates.
See https://ubuntu.com/esm or run: sudo pro status


*** System restart required ***
```

- curl "https://awscli.amazonaws.com/awscli-exe-linux-x86_64.zip" -o "awscliv2.zip"

- unzip awscliv2.zip

- apt install unzip -y

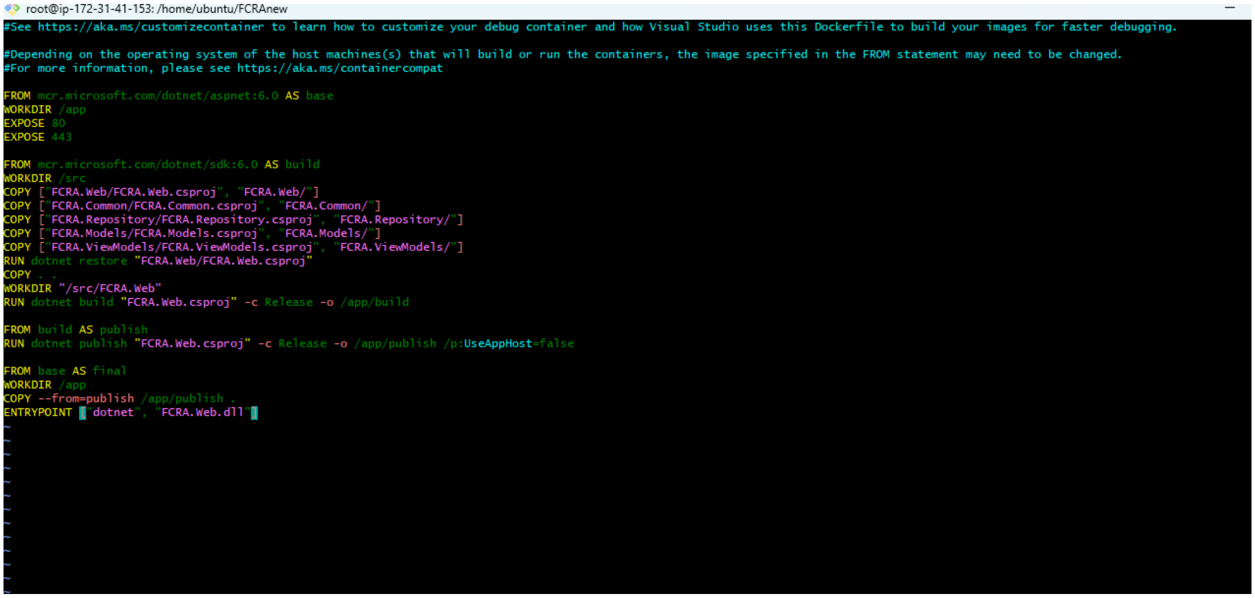
- unzip awscliv2.zip

- sudo ./aws/install (To check the path where it installed)

- AWS –version
- AWS configure (enter the id and password details of the iam role which u have been created)

Step3:

- Git clone https://github.com/shashikumar04433/FCRAnew.git (or we can drag and drop the files using tools)
- Create a docker file.

- Vi Dockerfile
- 

```
root@ip-172-31-41-153: /home/ubuntu/FCRAnew
#See https://aka.ms/customizecontainer to learn how to customize your debug container and how Visual Studio uses this Dockerfile to build your images for faster debugging.

#Depending on the operating system of the host machines(s) that will build or run the containers, the image specified in the FROM statement may need to be changed.
#For more information, please see https://aka.ms/containercompat

FROM mcr.microsoft.com/dotnet/aspnet:6.0 AS base
WORKDIR /app
EXPOSE 80
EXPOSE 443

FROM mcr.microsoft.com/dotnet/sdk:6.0 AS build
WORKDIR /src
COPY ["FCRA.Web/FCRA.Web.csproj", "FCRA.Web/"]
COPY ["FCRA.Common/FCRA.Common.csproj", "FCRA.Common/"]
COPY ["FCRA.Repository/FCRA.Repository.csproj", "FCRA.Repository/"]
COPY ["FCRA.Models/FCRA.Models.csproj", "FCRA.Models/"]
COPY ["FCRA.ViewModels/FCRA.ViewModels.csproj", "FCRA.ViewModels/"]
RUN dotnet restore "FCRA.Web/FCRA.Web.csproj"
COPY . .
WORKDIR "/src/FCRA.Web"
RUN dotnet build "FCRA.Web.csproj" -c Release -o /app/build

FROM build AS publish
RUN dotnet publish "FCRA.Web.csproj" -c Release -o /app/publish /p:UseAppHost=false

FROM base AS final
WORKDIR /app
COPY --from=publish /app/publish .
ENTRYPOINT ["dotnet", "FCRA.Web.dll"]
~
~
~
~
~
~
~
~
~
~
~
~
~
```

Step4: Create a ECR named Docker-ECR and then click on push commands and choose Linux:

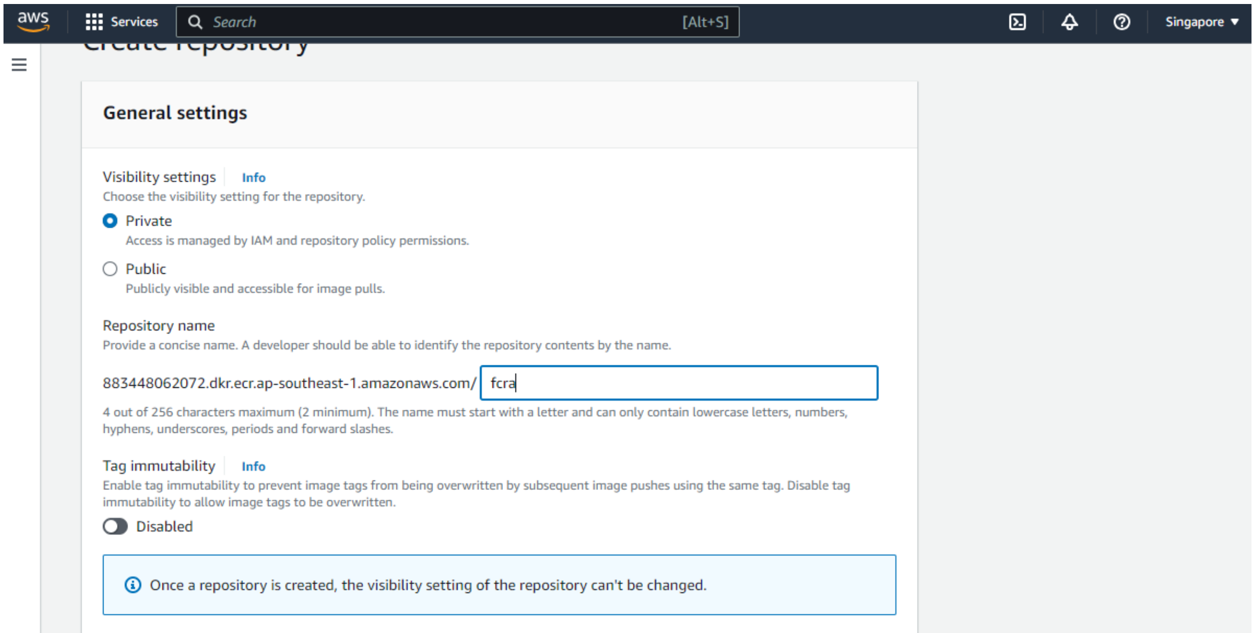
- aws ecr get-login-password --region ap-southeast-1 | docker login --username AWS --password-stdin 883448062072.dkr.ecr.ap-southeast-1.amazonaws.com

- docker build -t fcra .

- docker images

- docker tag fcra:latest 883448062072.dkr.ecr.ap-southeast-1.amazonaws.com/fcra:latest

- docker push 883448062072.dkr.ecr.ap-southeast-1.amazonaws.com/fcra:latest



Create repository

General settings

Visibility settings | Info
Choose the visibility setting for the repository.

● Private
Access is managed by IAM and repository policy permissions.

○ Public
Publicly visible and accessible for image pulls.

Repository name
Provide a concise name. A developer should be able to identify the repository contents by the name.

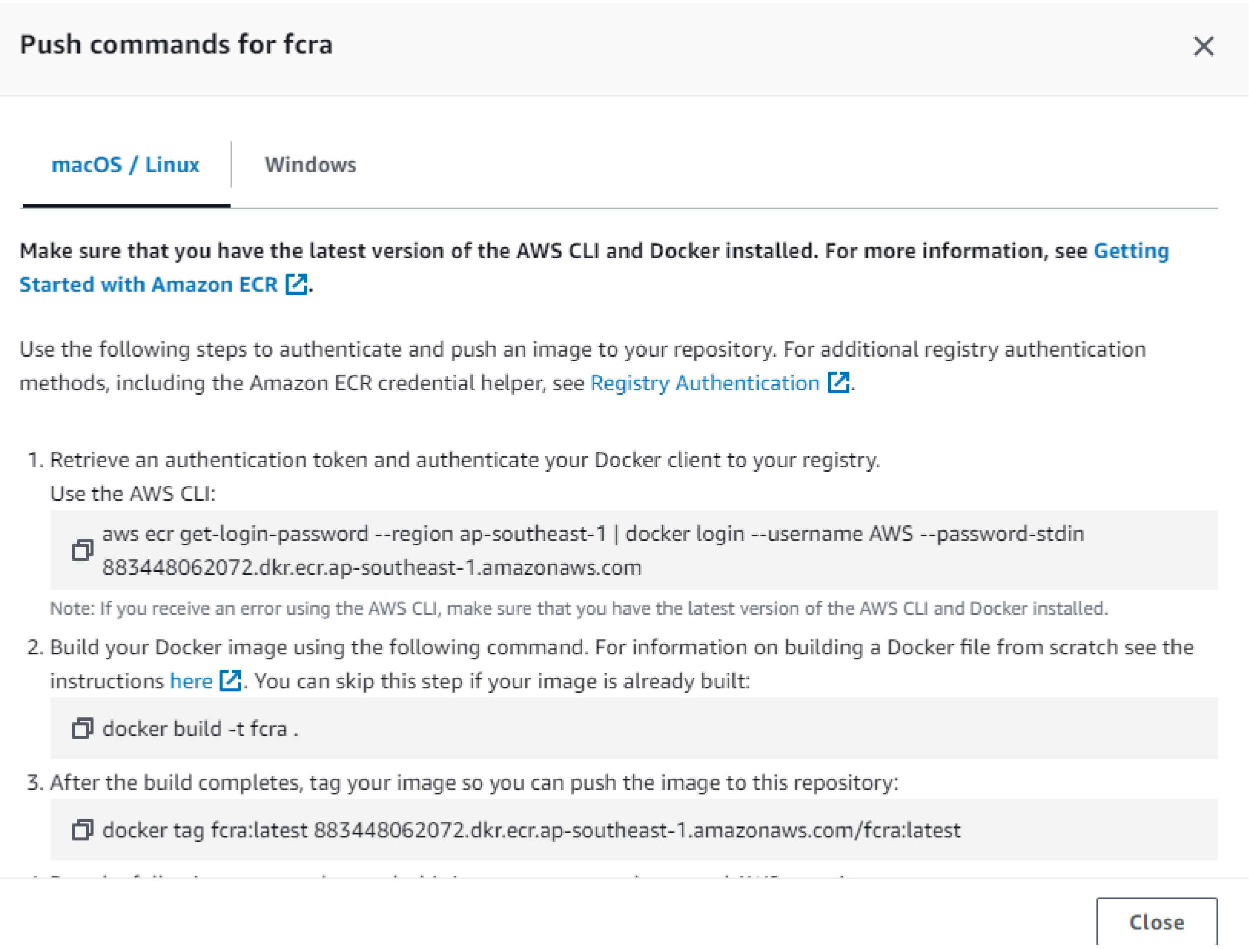
883448062072.dkr.ecr.ap-southeast-1.amazonaws.com/ fcra

4 out of 256 characters maximum (2 minimum). The name must start with a letter and can only contain lowercase letters, numbers, hyphens, underscores, periods and forward slashes.

Tag immutability | Info
Enable tag immutability to prevent image tags from being overwritten by subsequent image pushes using the same tag. Disable tag immutability to allow image tags to be overwritten.

Disabled

ⓘ Once a repository is created, the visibility setting of the repository can't be changed.



Push commands for fcra

Make sure that you have the latest version of the AWS CLI and Docker installed. For more information, see Getting Started with Amazon ECR.

Use the following steps to authenticate and push an image to your repository. For additional registry authentication methods, including the Amazon ECR credential helper, see Registry Authentication.

1. Retrieve an authentication token and authenticate your Docker client to your registry.
   Use the AWS CLI:

```
aws ecr get-login-password --region ap-southeast-1 | docker login --username AWS --password-stdin
883448062072.dkr.ecr.ap-southeast-1.amazonaws.com
```

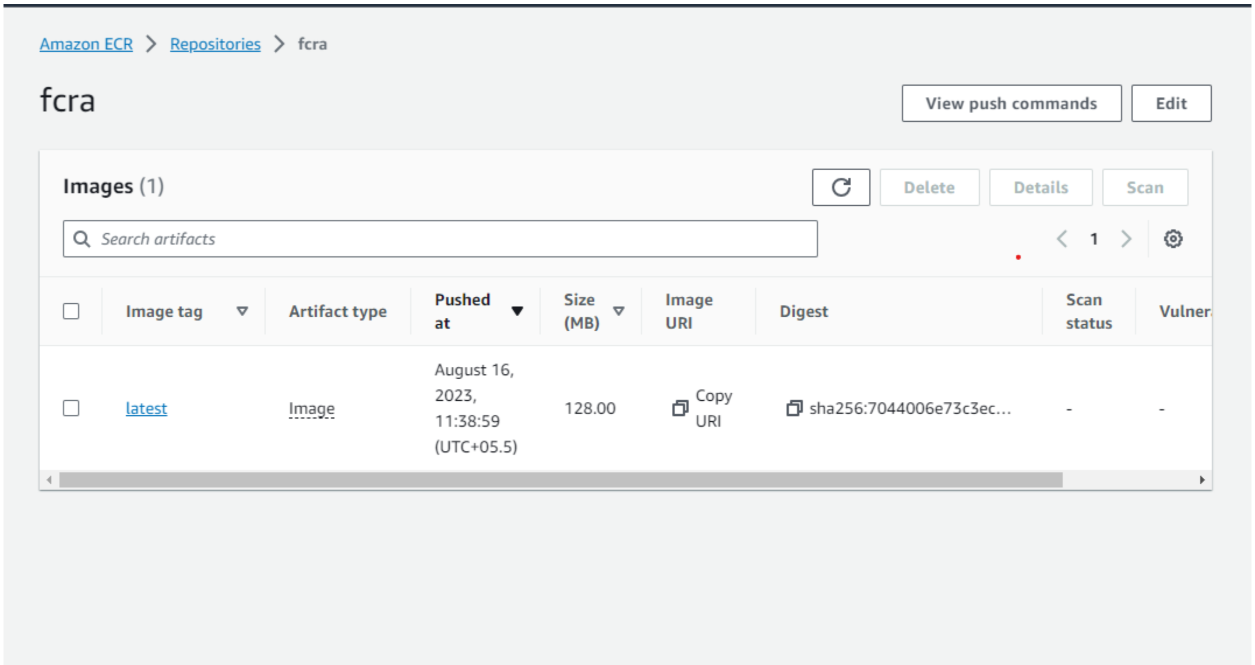
   Note: If you receive an error using the AWS CLI, make sure that you have the latest version of the AWS CLI and Docker installed.

2. Build your Docker image using the following command. For information on building a Docker file from scratch see the instructions here. You can skip this step if your image is already built:

```
docker build -t fcra .
```

3. After the build completes, tag your image so you can push the image to this repository:

```
docker tag fcra:latest 883448062072.dkr.ecr.ap-southeast-1.amazonaws.com/fcra:latest
```



Amazon ECR > Repositories > fcra

fcra

View push commands | Edit

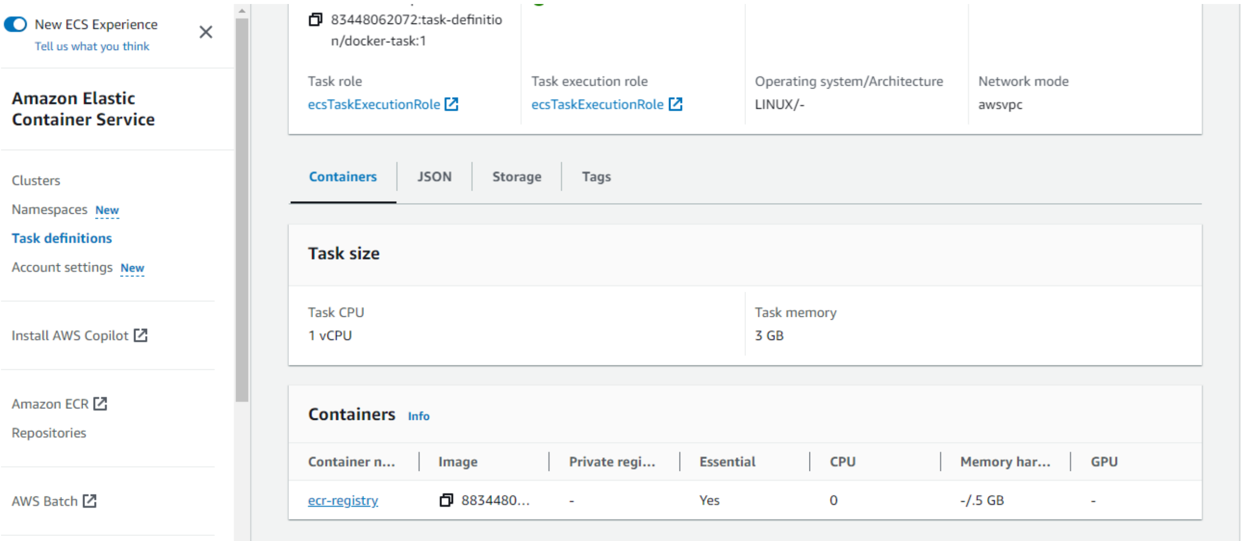
Images (1)

Delete | Details | Scan

Search artifacts

□	Image tag	Artifact type	Pushed at	Size (MB)	Image URI	Digest	Scan status	Vulner
□	latest	Image	August 16, 2023, 11:38:59 (UTC+05.5)	128.00	Copy URI	sha256:7044006e73c3ec...	-	-

Step5: Create a ECS and attach the docker ECR image url.



83448062072:task-definition/docker-task:1

Task role	Task execution role	Operating system/Architecture	Network mode
ecsTaskExecutionRole	ecsTaskExecutionRole	LINUX/-	awsvpc

Containers | JSON | Storage | Tags

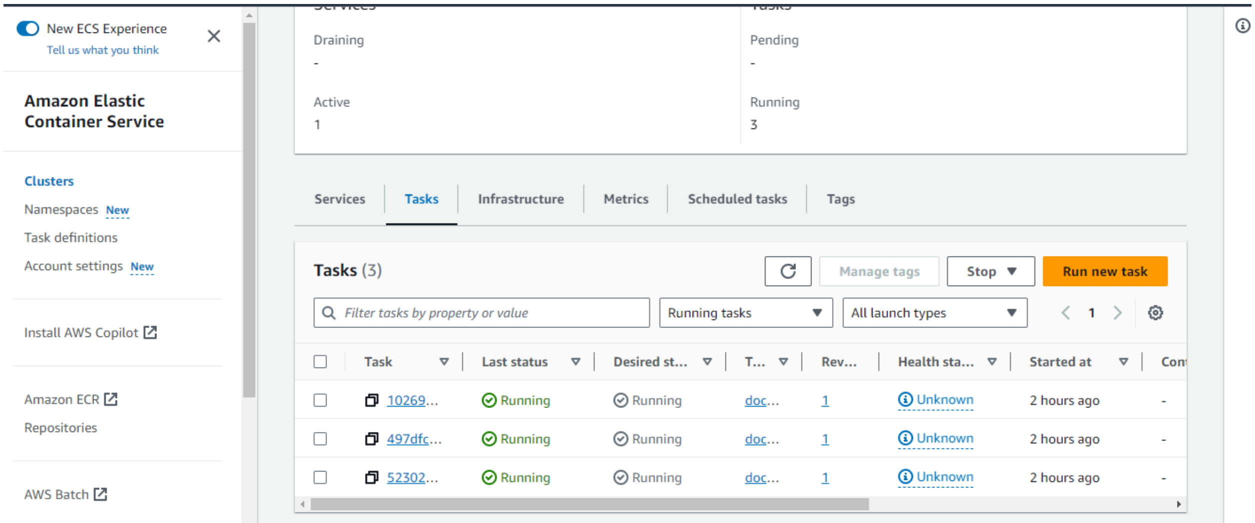
Task size

Task CPU	Task memory
1 vCPU	3 GB

Containers Info

Container n...	Image	Private regi...	Essential	CPU	Memory har...	GPU
ecr-registry	8834480...	-	Yes	0	-/.5 GB	-

Create a service and tasks to view in browser.



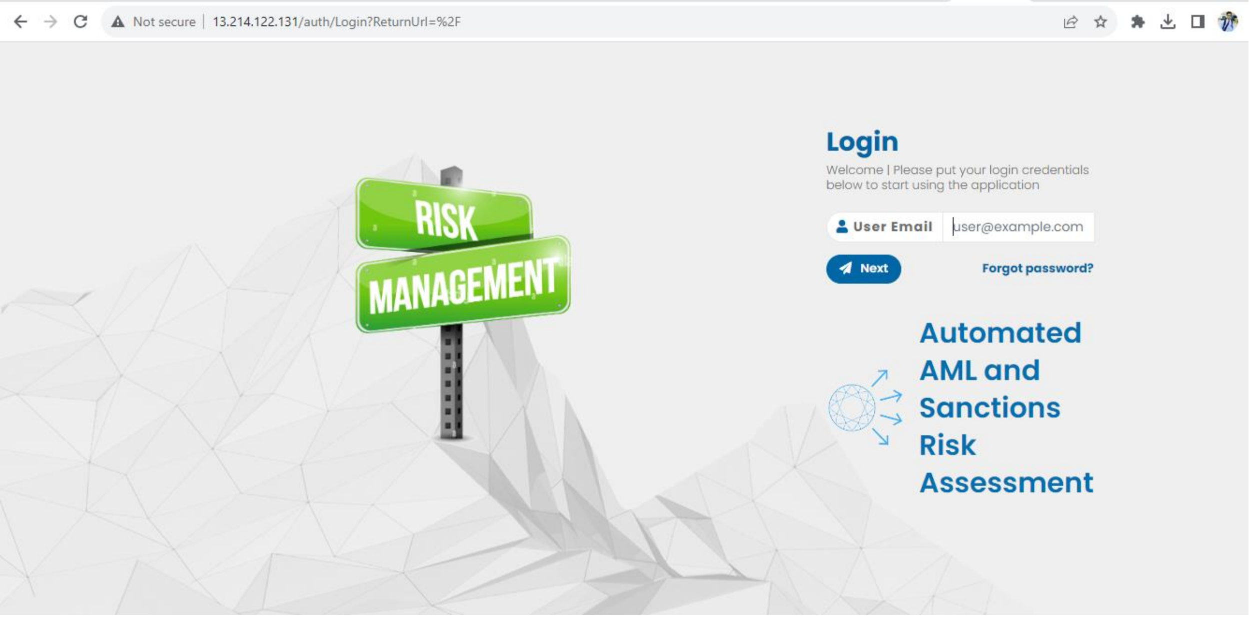
Draining -	Pending -
Active 1	Running 3

Tasks (3)

Filter tasks by property or value | Running tasks | All launch types | 1

□	Task	Last status	Desired st...	T...	Rev...	Health sta...	Started at	Con
□	10269...	Running	Running	doc...	1	Unknown	2 hours ago	-
□	497dfc...	Running	Running	doc...	1	Unknown	2 hours ago	-
□	52302...	Running	Running	doc...	1	Unknown	2 hours ago	-

- **Copy the public ip and paste in the brower.**



Not secure | 13.214.122.131/auth/Login?ReturnUrl=%2F

Login

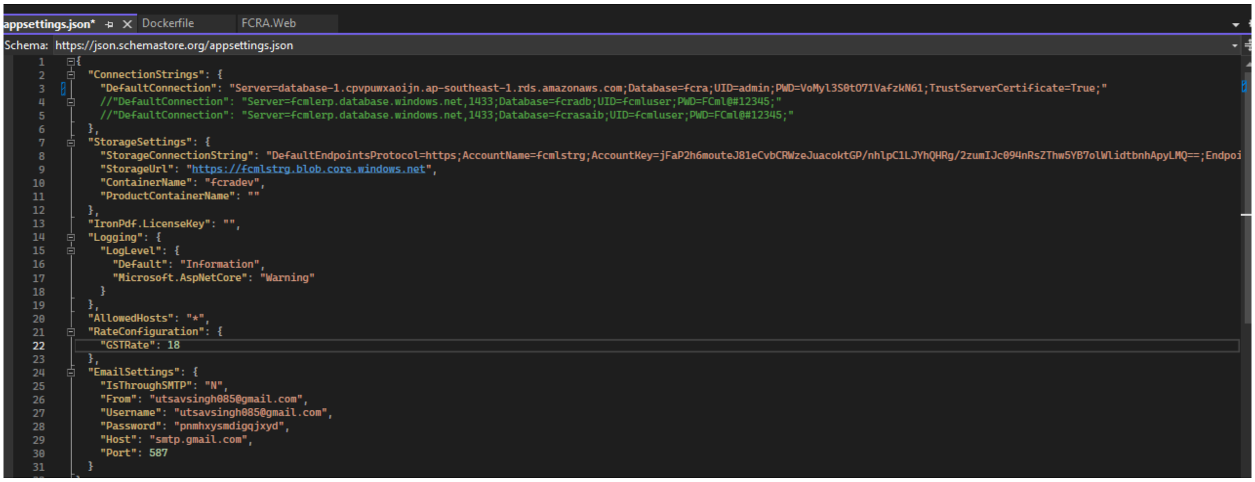
Welcome | Please put your login credentials below to start using the application

User Email: user@example.com

Automated AML and Sanctions Risk Assessment

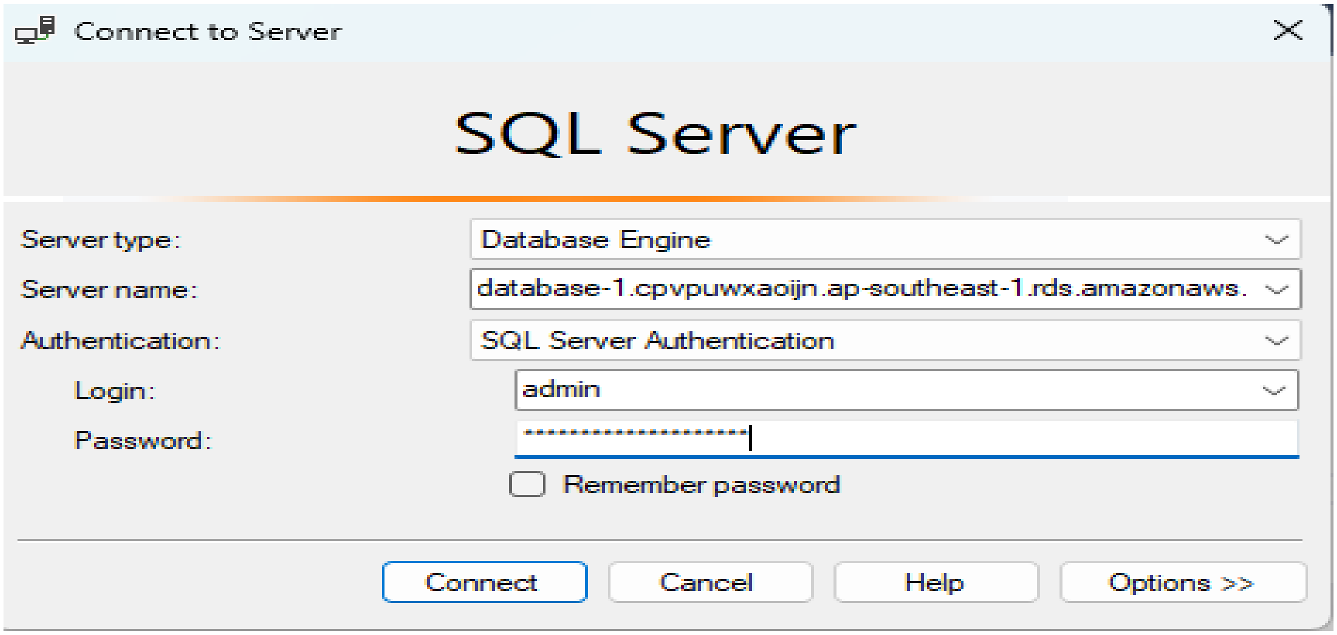
Step6: Create a database for the above ui and attach to it:

- Attach the database server in the local file app.json and connect it to the database.



Schema: https://json.schemastore.org/appsettings.json

```
{
  "ConnectionStrings": {
    "DefaultConnection": "Server=database-1.cpvpuwxaoijn.ap-southeast-1.rds.amazonaws.com;Database=fcra;UID=admin;PWD=VoMyl3S0tO71VafzkN61;TrustServerCertificate=True;"
    //"DefaultConnection": "Server=fcmlerp.database.windows.net,1433;Database=fcradb;UID=fcmluser;PWD=FCml@#12345;"
    //"DefaultConnection": "Server=fcmlerp.database.windows.net,1433;Database=fcrasaib;UID=fcmluser;PWD=FCml@#12345;"
  },
  "StorageSettings": {
    "StorageConnectionString": "DefaultEndpointsProtocol=https;AccountName=fcmlstrg;AccountKey=jFaP2h6mouteJ81eCvbCRWzeJuacoktGP/nhlpC1LJYhQHRg/2zumIJc094nRsZThw5YB7olWlidtbnhApyLMQ==;Endpoi
    "StorageUrl": "https://fcmlstrg.blob.core.windows.net",
    "ContainerName": "fcradev",
    "ProductContainerName": ""
  },
  "IronPdf.LicenseKey": "",
  "Logging": {
    "LogLevel": {
      "Default": "Information",
      "Microsoft.AspNetCore": "Warning"
    }
  },
  "AllowedHosts": "*",
  "RateConfiguration": {
    "GSTRate": 18
  },
  "EmailSettings": {
    "IsThroughSMTP": "N",
    "From": "utsavsingh085@gmail.com",
    "Username": "utsavsingh085@gmail.com",
    "Password": "pnmhxysmdigqjxyd",
    "Host": "smtp.gmail.com",
    "Port": 587
  }
```



Server type: Database Engine

Server name: database-1.cpvpuwxaoijn.ap-southeast-1.rds.amazonaws.

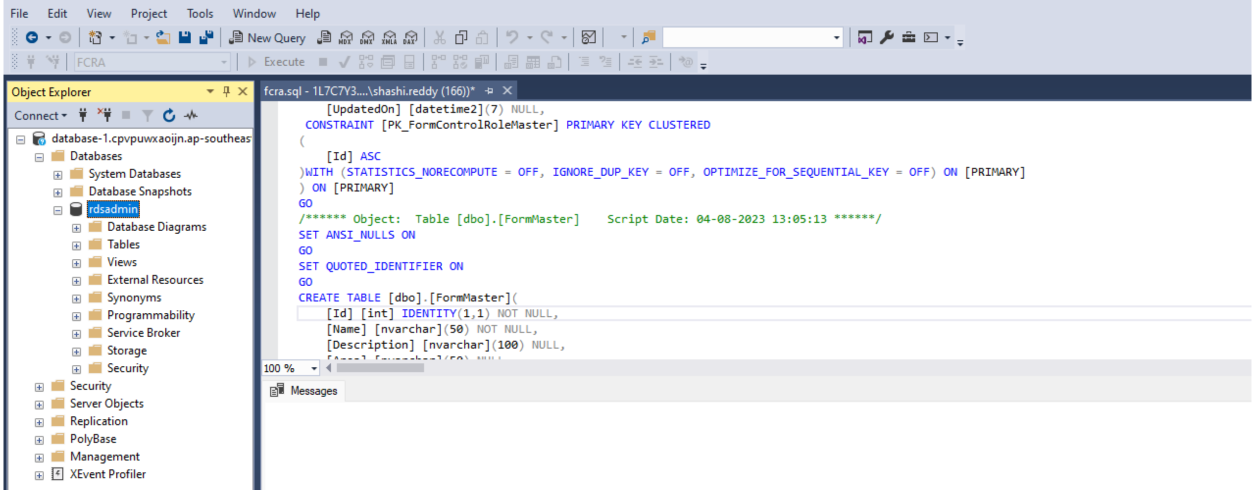
Authentication: SQL Server Authentication

Login: admin

Password: ********************

□ Remember password

- Connected to the database using the above details.



```
    [UpdatedOn] [datetime2](7) NULL,
 CONSTRAINT [PK_FormControlRoleMaster] PRIMARY KEY CLUSTERED
(
    [Id] ASC
)WITH (STATISTICS_NORECOMPUTE = OFF, IGNORE_DUP_KEY = OFF, OPTIMIZE_FOR_SEQUENTIAL_KEY = OFF) ON [PRIMARY]
) ON [PRIMARY]
GO
/****** Object:  Table [dbo].[FormMaster]    Script Date: 04-08-2023 13:05:13 ******/
SET ANSI_NULLS ON
GO
SET QUOTED_IDENTIFIER ON
GO
CREATE TABLE [dbo].[FormMaster](
    [Id] [int] IDENTITY(1,1) NOT NULL,
    [Name] [nvarchar](50) NOT NULL,
    [Description] [nvarchar](100) NULL,
```