Lab 3B: Deploy Docker Image from ECR to ECS

Objective

Use the AWS Console to deploy your Docker image (already pushed to ECR in Lab 3) to a fully managed **ECS Fargate** service.

Step-by-Step Using AWS Console

Step 1: Confirm Your Image Exists in ECR

1. Go to the AWS Console → search for **ECR**
2. Open your repository (e.g., `sample-web-app`)
3. Confirm that `sample-web-app:latest` exists under **Images**

If it's there, you're good to go!

Step 2: Create an ECS Cluster

1. Go to AWS Console → search for **ECS**
2. Click **Clusters** > **Create Cluster**
3. Select **“Networking only” (Fargate)** → Click **Next**
4. Enter a **Cluster name**: `demo-cluster`
5. Click **Create**

You’ve now created a Fargate-ready ECS cluster.

Step 3: Create a Task Definition

1. Go to **Task Definitions** > **Create new Task Definition**
2. Choose **FARGATE** > Click **Next**

Configure Task:

- Name: `sample-web-task`
- Task role: *(leave default or create new if needed)*
- Task size:

- Memory: `0.5 GB`
- vCPU: `0.25 vCPU`

Add Container:

- Container name: `web`
- Image URI:
  Go to your ECR repo, copy the full URI like:

  ```
  605463757083.dkr.ecr.us-east-1.amazonaws.com/sample-web-app:latest
  ```

  Paste it into the “Image URI” field
- Port mapping: container port `80`

Click **Add**, then **Create** task definition.

Step 4: Run a Fargate Service

1. Go to **Clusters** → click your cluster (`demo-cluster`)
2. Click **Deploy** → **Create service**
3. Launch type: `FARGATE`
4. Task definition: choose `sample-web-task`
5. Cluster: `demo-cluster`
6. Service name: `web-service`
7. Number of tasks: `1`

Networking:

- VPC: pick default VPC (if available)
- Subnets: pick **2 public subnets**
- Auto-assign public IP: **ENABLED**
- Security group:
  - Create new or pick existing
  - **Allow inbound port 80 (HTTP)**

Click **Next**, then **Create service**

Step 5: Access Your Web App

1. Go to your cluster > **Tasks** tab
2. Click the Task ID

3. Find the **ENI (Elastic Network Interface)** → click it
4. Look under **Public IPv4 address** — copy it
5. Paste it in your browser:
   `http://<public-ip>`

You should see your **index.html** content served by Nginx via Fargate.

Cleanup (Optional)

- Stop the service and delete the cluster
- Delete ECR repo (optional)
- Avoid costs from idle resources