Running an Nginx Container with Docker Compose on AWS EC2

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1. Launch an EC2 Instance

1. Go to AWS EC2 Console → Launch Instance.
2. Configure:
   - Region: Any (e.g., Mumbai ap-south-1)
   - AMI: Ubuntu 24.04 LTS
   - Instance Type: t2.micro
   - Key Pair: docker-compose-key
   - VPC: Default
   - AZ: ap-south-1a
   - Security Group: docker-compose-sg (Allow SSH 22, HTTP 80, Custom TCP 8080-9090)
   - Storage: 8 GB
3. Launch the instance.

2. Connect to the Instance

Use SSH to connect to the instance:

```
ssh -i docker-compose-key.pem ubuntu@<EC2-Public-IP>
```

3. Install Docker and Docker Compose

Run the following commands:

```
sudo apt update
sudo apt install -y docker.io docker-compose
```

Verify installation:

```
docker --version
docker-compose --version
```

4. Create the Docker Compose File

Open and edit file:

```
vim docker-compose.yml
```

Add:

```
services:
  nginx:
    image: nginx:latest
    container_name: nginx_server
    ports:
      - "8080:80"
    volumes:
      - ./html:/usr/share/nginx/html
    restart: always
```

5. Create a Website Directory

Check directory:

```
ls -l /root/html
```

If missing, create it:

```
mkdir -p /root/html
echo "<h1>Hello from Docker Nginx</h1>" > /root/html/index.html
```

6. Start the Nginx Container

Run:

```
docker-compose up -d

docker ps -a
docker images
```

7. Access the Website

Open browser and visit:

```
http://<EC2-Public-IP>:8080
```

8. Managing Docker Compose

Useful commands:

- Stop: docker-compose stop
- Start: docker-compose up -d
- Remove: docker-compose down
- List Containers: docker ps -a
- List Images: docker images
- Remove Image: docker rmi ubuntu

9. Cleanup

After practice, terminate the EC2 instance to avoid charges.

Summary

You have successfully deployed an Nginx container on AWS EC2 using Docker Compose, create