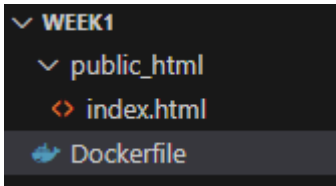


Lab Logbook	
Student ID Alex Garcia	Date 24/10/24
Briefly introduce the aim of this lab	This lab aims to explore using docker as part of securing cloud virtualisation solutions and use it as our first mode of deployment in the cloud.
Identify the tools used for each task and why it was required.	<p>For the first part of the lab, I had to use visual studio code for the development environment and install docker desktop application on my computer to run the application image.</p> <p>The commands I used for building the image and running the image in VS:</p> <ul style="list-style-type: none"> - docker build -t my-web-app . - docker run -d -p 8080:80 my-web-app <p>For the second part of the lab, I had to create an AWS application to then push the docker container to ECS. I had to download AWS CLI to connect from my deployment environment to the AWS servers.</p>
What are your observations from each task?	My observation from each task was that there are a lot of commands to input to make the web application work and a lot of settings must be manually configured to ensure it is fully functional.
Report your lab experimental result for each task	<p>File tree for the first section of the lab</p>  <p>Website application running on localhost:8080</p>

My Static Site

localhost:8080

Hello World!

Hi there - This is a simple static website!

```
PS C:\Users\Alex\Desktop\WEEK1> aws configure
AWS Access Key ID [None]: AKIAS252MFQFEYY4PPXF
AWS Secret Access Key [None]: 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
Default region name [None]: us-east-1
Default output format [None]: json
```

I made sure to download the AWS CLI to work with it in the VS Code terminal to connect to my AWS account and push the docker image there.

After creating a directory, I then did commands to push the docker image to AWS.

Amazon ECR > Private registry > Repositories > alex/scc

alex/scc

View push commands

Images (3)

Search artifacts

	Image tag	Artifact type	Pushed at	Size (MB)
<input type="checkbox"/>	latest	Image Index	28 October 2024, 19:19:06 (UTC-00)	89.01

×

Windows

Started with Amazon ECR [↗](#)

methods, including the Amazon ECR credential helper, see [Registry Authentication](#)

- ```
aws ecr get-login-password --region eu-north-1 | docker login --username AWS --password-stdin
```

```
aws ecr get-login-password --region eu-north-1 | docker login --username AWS --password-stdin
195275664394.dkr.ecr.eu-north-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 alex/scc .
```

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

 docker tag alex/scc:latest 195275664394.dkr.ecr.eu-north-1.amazonaws.com/alex/scc:latest

4. Run the following command to push this image to your newly created AWS repository:

 `docker push 195275664394.dkr.ecr.eu-north-1.amazonaws.com/alex/scc:latest`

Close

[illegible]

I then created an ECS Cluster to deploy the docker image.

The screenshot shows the Amazon ECS console. At the top, a green banner displays a success message: "Cluster my-cluster1 has been created successfully." with a "View cluster" button. Below this, the breadcrumb navigation shows "Amazon Elastic Container Service" and "Clusters". The main content area is titled "Clusters (1) Info". It indicates the cluster was "Last updated October 28, 2024 at 19:32 (UTC)" and provides a "Create cluster" button. A search bar labeled "Search clusters" is present. At the bottom, a table lists the cluster "my-cluster1" with 0 services and no tasks running.

I then created a task definition and added a container.

[Azure Elastic Container Service](#)
[Task definition](#)
[web-app](#)
[Services](#)
[Containers](#)

## web-app-1

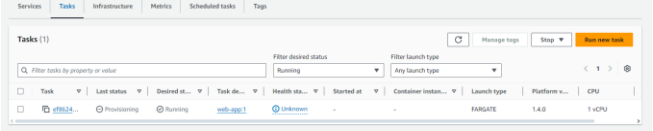
Deploy
Actions
Create new revision

---

### Overview

|                                                                             |                                                                    |                                                        |                                   |
|-----------------------------------------------------------------------------|--------------------------------------------------------------------|--------------------------------------------------------|-----------------------------------|
| <b>ARN</b><br>arn:aws:ecs:us-east-1:1195275644394:task-definition/web-app-1 | <b>Status</b><br><span>ACTIVE</span>                               | <b>Time created</b><br>October 28, 2024 at 19:39 (UTC) | <b>App environment</b><br>Fargate |
| <b>Task role</b><br>-                                                       | <b>Task execution role</b><br><a href="#">ecsTaskExecutionRole</a> | <b>Operating system/architecture</b><br>Linux/ARM_64   | <b>Network mode</b><br>aws-ec2    |

I then ran a new task which allowed me to deploy the docker image.

|                                       |                                                                                                                                                                                                                                                                                                                     |
|---------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                       |                                                                                                                                                                                                                                   |
| What was your takeaway from the tasks | What I learnt from the tasks is how to create a simple web application in a development environment using docker and using AWS as a deployment service. I also learnt how to create clusters and run tasks to deploy the web application in AWS and before that push the docker image to AWS through push commands. |