

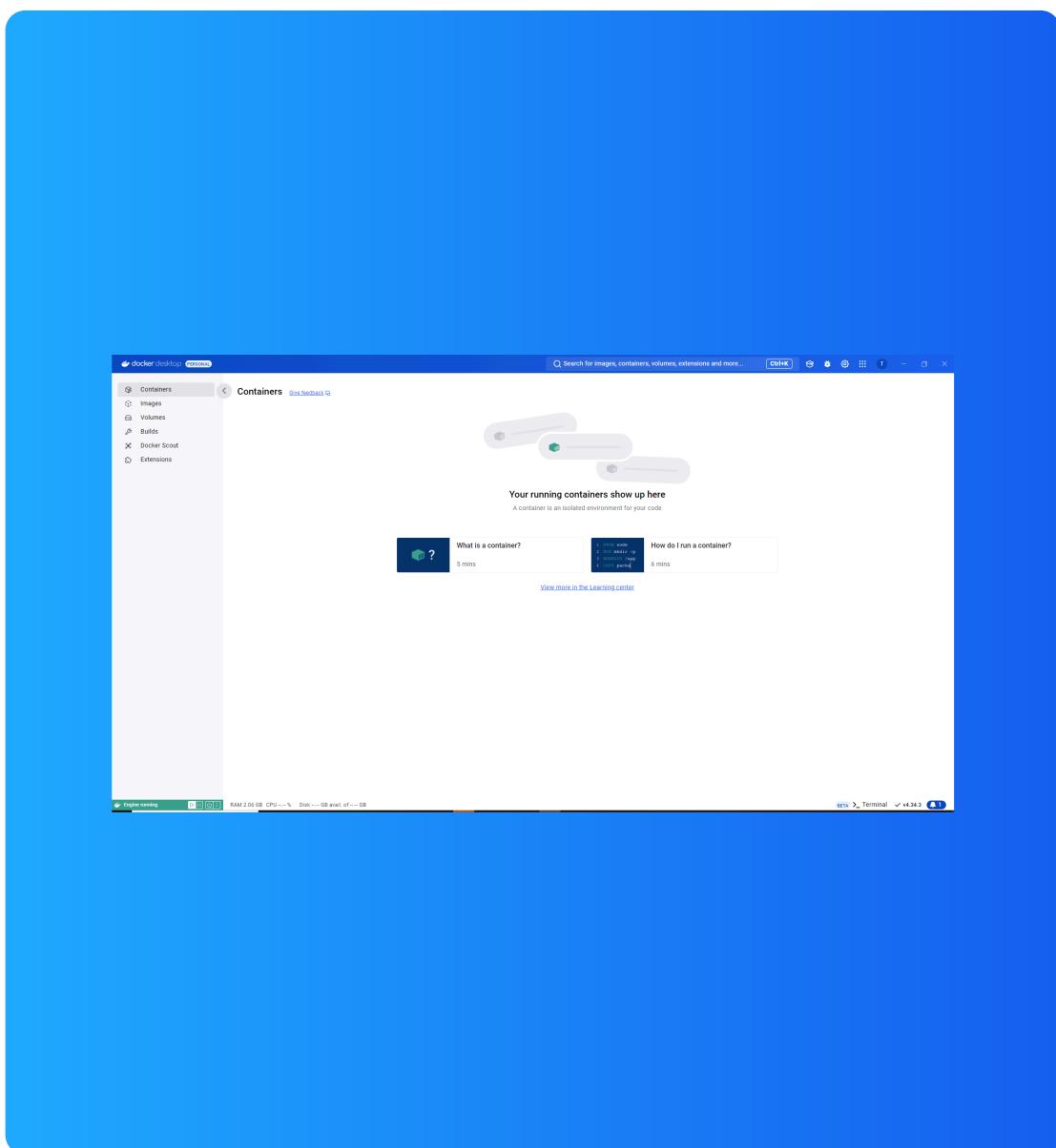


NextWork.org

Containers on Elastic Beanstalk



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Introducing Today's Project!

What is Docker?

I used Docker to create containers based on container images and set up my own container image.

One thing I didn't expect...

IAM policy role in deploying AWS resources

This project took me...

2 hours

Understanding Containers and Docker

Containers

Containers are tools for packaging applications in a way that's easy for other developers to run. They are useful because they help developers/engineers working in a team share their work more efficiently.

A container image is a template or blueprint for creating containers. Containers spawned/created from the same container image will behave in the same way, which helps developers in a team have a unified experience when they are running an app.

Docker

Docker is a platform for creating and managing containers. Docker Desktop is software that can interact with Docker itself easily.

The Docker daemon is like the 'engine' for Docker. It receives commands we send through clients, e.g., clients in the Docker Desktop or text commands sent in the terminal, and actually creates/manages/controls the containers.

Running an Nginx Image

Nginx is a web server/ software that helps serve web content. It is also referred to as a proxy server, which means it helps distribute traffic to your application across the instances running it.

The command I ran to start a new container was docker run. I also set the flags '-d -p 80:80 nginx', which means we're running the containers in the background (-d) we're matching port 80 in our host computer to the container port 80(-p80:80)

Welcome to nginx!

If you see this page, the nginx web server is successfully installed and working. Further configuration is required.

For online documentation and support please refer to nginx.org.
Commercial support is available at nginx.com.

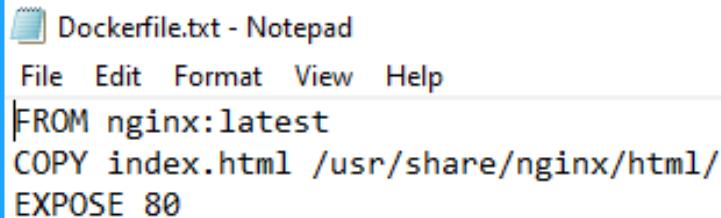
Thank you for using nginx.

Creating a Custom Image

The Docker File is a set of instructions that tells Docker how to build your custom Container image.

My Dockerfile tells Docker three things: first, our custom container image uses (the latest version of the Nginx container image at its base. Then, We're modifying this base by replacing the default Nginx welcome page with an index.html

The command I used to build a custom image with my Dockerfile was 'docker build' The '' at the end of the command means that Docker can find the Dockerfile in the current directory i.e the compute folder on our desktop.

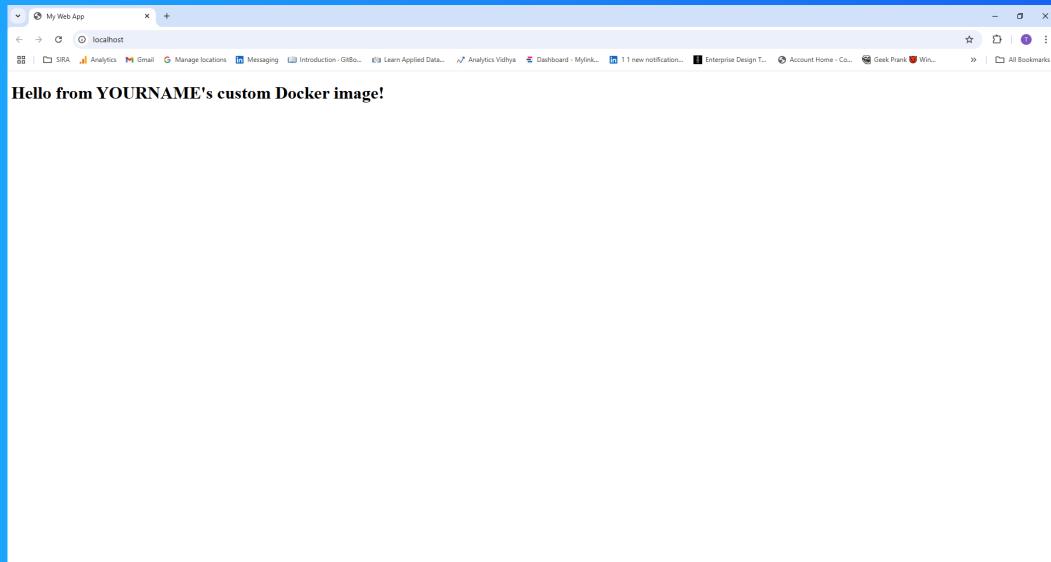


```
Dockerfile.txt - Notepad
File Edit Format View Help
FROM nginx:latest
COPY index.html /usr/share/nginx/html/
EXPOSE 80
```

Running My Custom Image

There was an error when I ran my custom image because we tried to map our port 80 with the new container but a running container was already using port 80 I resolved this by stopping the running container so that we can start a new one

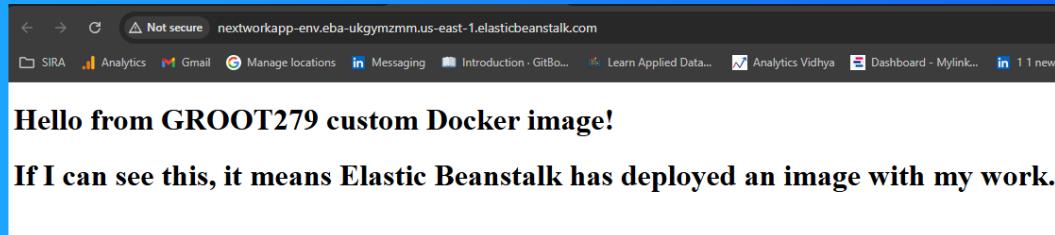
In this example, the container image is the template for creating a new container running an nginx that serves our custom index.html file. The container is the actual software that's running an Nginx web server with those customization.



Elastic Beanstalk

Elastic Beanstalk is a service that makes it easy to deploy cloud applications without worrying about the underlying infrastructure. I simply upload my code and Elastic Beanstalk handles everything needed to get it running.

Elastic Beanstalk took me 10 minutes. This includes the time it took to launch the Elastic Beanstalk application.





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