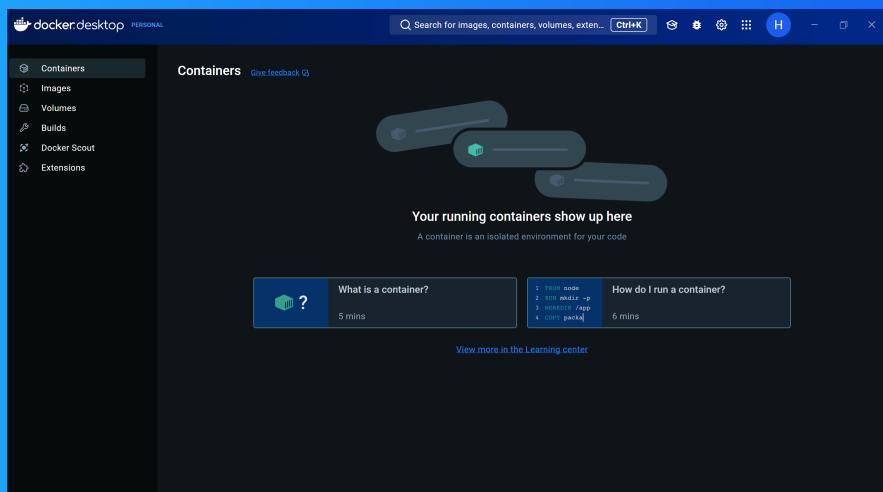




Containers on Elastic Beanstalk



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Introducing Today's Project!

What is Docker?

In this project, we used Docker to create containers based on Container images and setup our own container image.

One thing I didn't expect...

One thing I didn't expect was how quick it is to deploy an application using Elastic Beanstalk.

This project took me...

This project took me 2 and half hour including documentation .

Understanding Containers and Docker

Containers

Containers are tools for packaging applications in a way that's easy for developers to run. They are useful because it helps developers/engineers working in a team together to share their work in a more efficient way.

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

Docker

Docker is a platform for creating and managing containers.Docker makes working with containers easy. Docker Desktop is a software for using/interacting with Docker.Docker Desktop makes using Docker itself easy.

The Docker daemon is like the 'Engine' for Docker that receives commands we run through 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 / a software that helps with serving web content. Nginx is often referred to as a proxy server, which means it helps with distributing to your application across the instances running your application.

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

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.

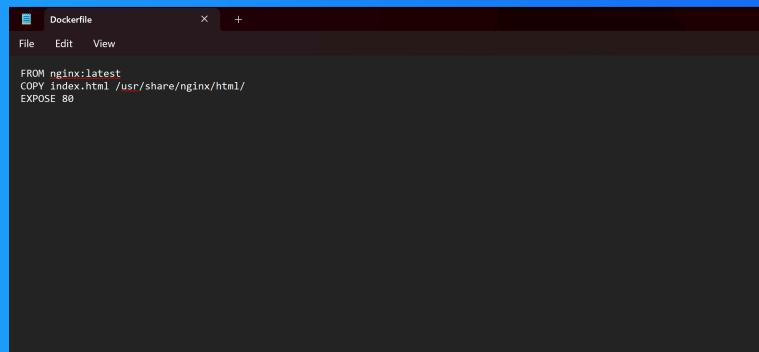
Thank you for using nginx.

Creating a Custom Image

The Dockerfile 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 it's base). Then, we are modifying this base by replacing default Nginx welcome page with our own custom 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 my desktop.

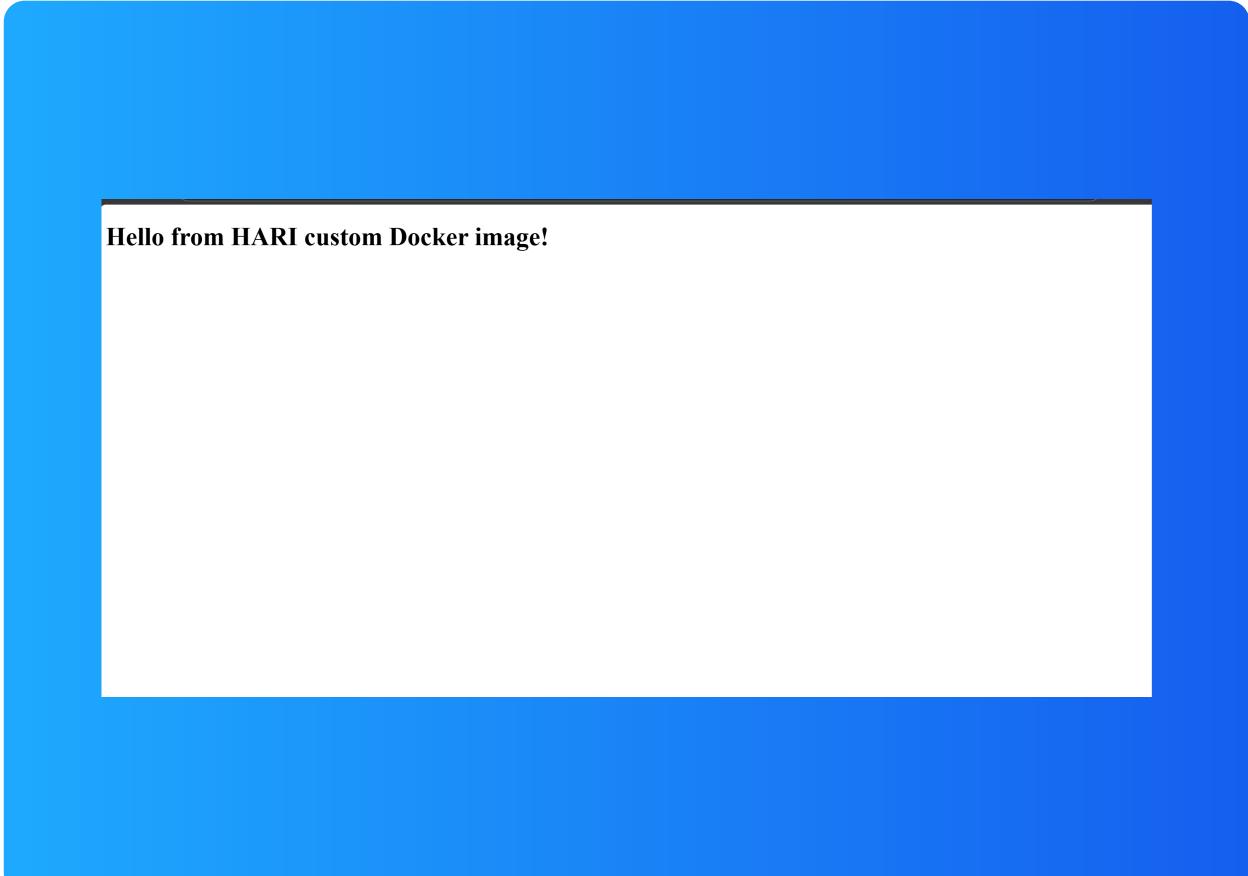


```
Dockerfile
FROM nginx:latest
COPY index.html /usr/share/nginx/html/
EXPOSE 80
```

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's port 80, 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 server that serves our custom index.html file. The Container is the actual software that's running an Nginx web server with those customizations.

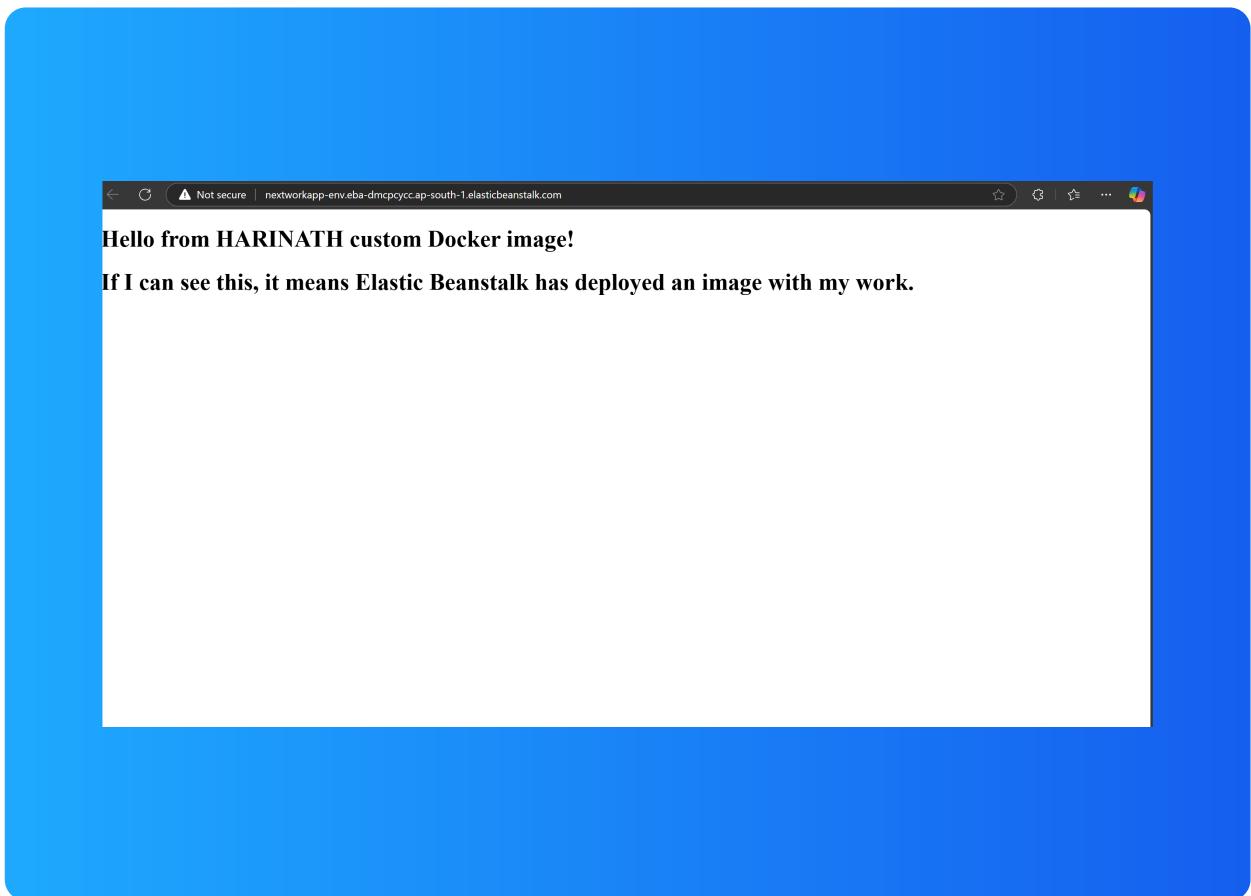


Hello from HARI custom Docker image!

Elastic Beanstalk

Elastic Beanstalk is a AWS service that help us to deploying cloud applications without worrying about the underlying infrastructure.

Deploying my custom image with Elastic Beanstalk took me 3 minutes.





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