

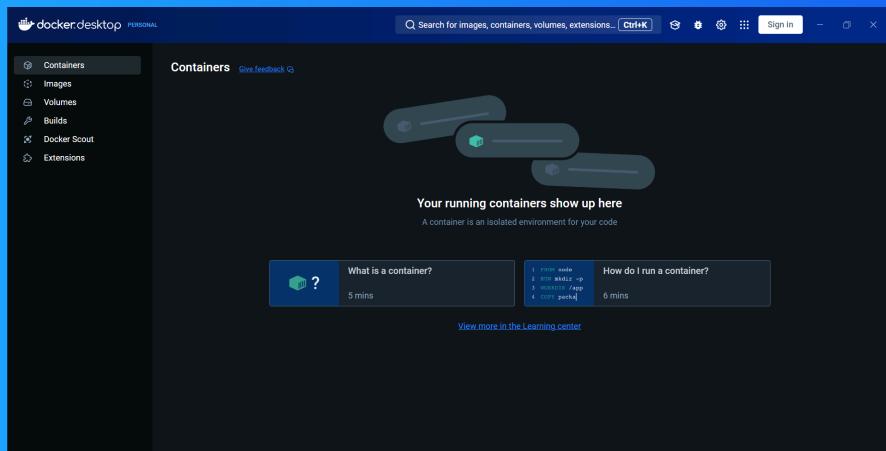


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Containers on Elastic Beanstalk



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Introducing Today's Project!

What is Docker?

In this project i used docker to create containers based on container images and set up my own container image.

One thing I didn't expect...

One thing I didn't expect in this project was how Docker made managing dependencies easier. It ensured that the application ran consistently by packaging everything together, avoiding issues with different software versions across environments.

This project took me...

This project took me about two hours, including setting up Docker, writing the Dockerfile, troubleshooting, and ensuring the application ran consistently. The time may vary depending on specific issues encountered during setup and configuration.

Understanding Containers and Docker

Containers

Containers are like small, self-contained packages that hold everything needed to run an application. This includes the app itself, its settings, and any tools or libraries it needs.

A container image is a lightweight, standalone package that contains everything needed to run a piece of software, including the code, runtime, libraries, dependencies, and configuration files.

Docker

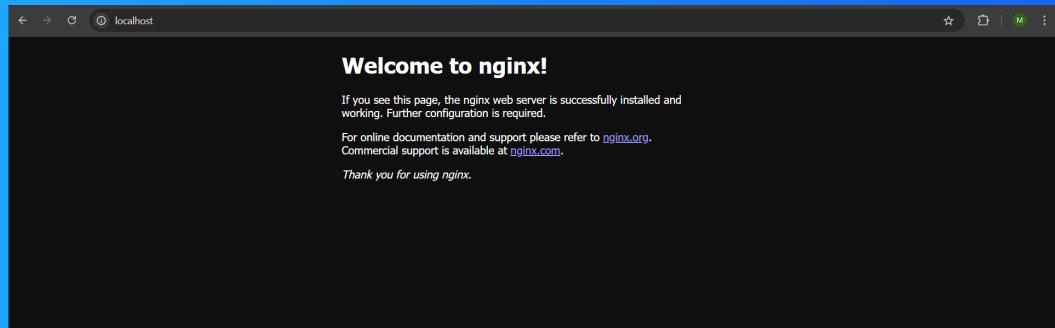
Docker is a platform for creating and managing containers. Docker makes working with containers easy. Docker Desktop is a software for using/interacting with Docker.

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

Running an Nginx Image

Nginx (pronounced "engine-x") is a powerful, high-performance web server and reverse proxy server. It is widely used for its ability to handle a large number of simultaneous connections efficiently.

docker run -d -p 80:80 nginx -d: Runs the container in detached mode (in the background). -p 80:80: Maps port 80 on your computer (host) to port 80 inside the container. nginx: Specifies the container image to use.



Creating a Custom Image

A Dockerfile is a text file that contains a set of instructions used by Docker to automatically build a Docker image.

FROM nginx:latest: Uses the latest Nginx image to create the container. COPY index.html /usr/share/nginx/html/: Copies your custom index.html into the Nginx folder. EXPOSE 80: Exposes port 80 to allow web traffic to access the server.

The command I used to build a custom image with my Dockerfile was docker build. The '' at the end of the command means' that the docker can find the dockerfile in my current directory.

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

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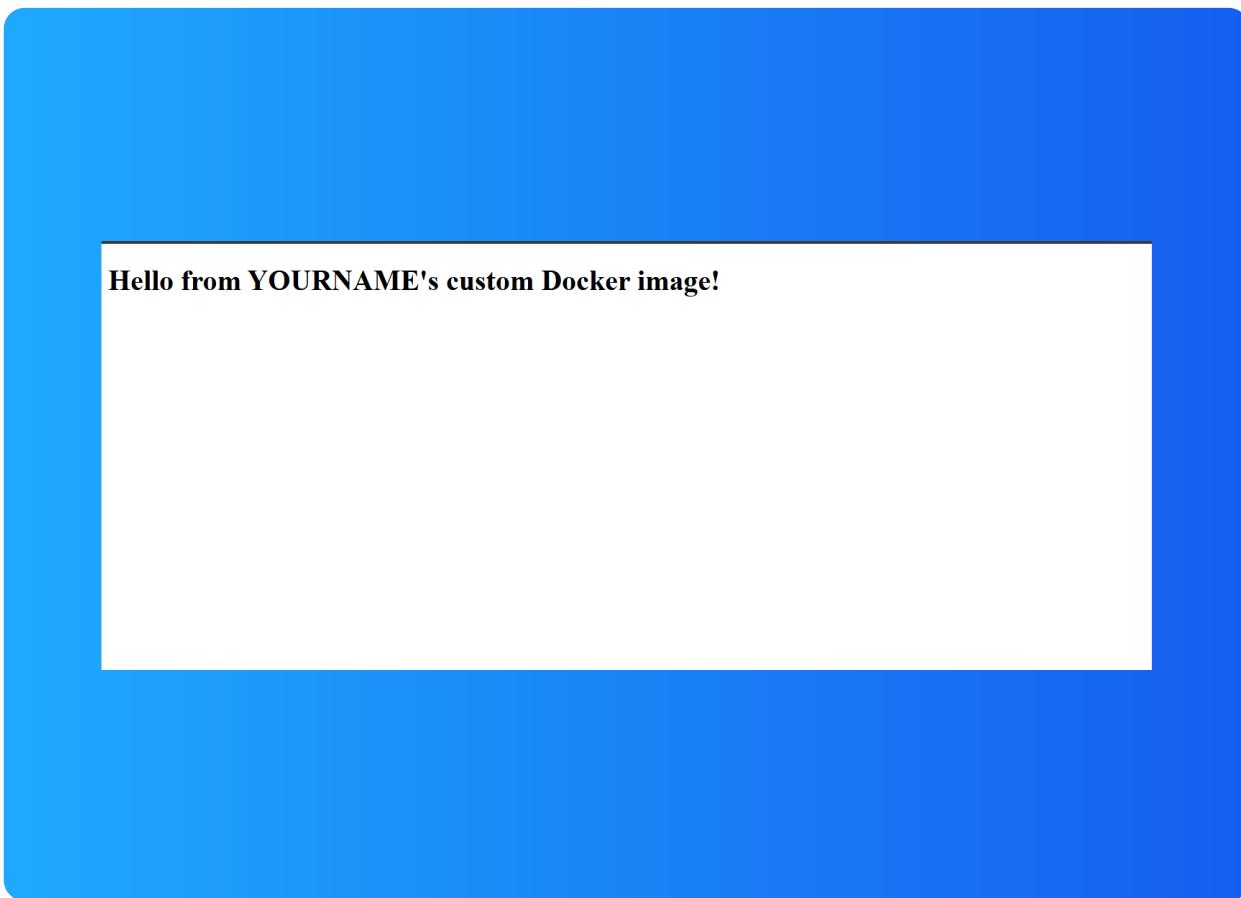
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Running My Custom Image

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

the container image is the template for creating a new container running an nginx server that serves custom index.html file. the container is the actual software that's running an nginx web server with those customisation.



Hello from YOURNAME's custom Docker image!

Elastic Beanstalk

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

Deploying my custom image with Elastic Beanstalk took me 10 minutes.

Hello from Aman's custom Docker image!

Hello from Erwin's custom Docker image!

Hello from Desire's custom Docker image!



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