Postcode Application Deployment Guide

(Version 1.0.0)

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# Version history

|  |  |  |  |
| --- | --- | --- | --- |
| Editor | Version | Description | Remark |
| Patrick Cheung | 1.0.0 | Initial release |  |

# Deployment to local

## Pre-requisites

* JDK11
* Maven

## Steps

1. Clone the source from the Git repository.

git clone https://github.com/patrickpycheung/postcode

1. The application can be started directly by running the following command at the project root folder.

mvn spring-boot:run

If you would like to create a JAR file from the source, run the following command.

mvn clean package

A JAR file will be created in the "target" folder and can be executed by the following command.

java -jar postcode-<artifcact version>.jar

# Deployment to an AWS EC2 (Amazon Linux 2) instance

In order to deploy the application on cloud server, we will need to containerize the application.

## Pre-requisites

* Docker

## Steps

### Build docker image and upload to a docker image repository

Note:

A ready-to-use image is available at DockerHub.

https://hub.docker.com/repository/docker/patrick888/postcode

1. Go to the root folder of the source. Build a docker image with the following command.

docker build --rm -t postcode:latest .

1. Tag the image with your repository username.  
     
     
     
   e.g.

docker image tag postcode:latest patrick888/postcode:latest

s

docker image tag postcode:latest <REPOSITORY USERNAME>/postcode:latest

s

1. Push the built image to a docker image repository like DockerHub or AWS ECR.  
     
     
     
   e.g.

docker image push patrick888/postcode:latest

s

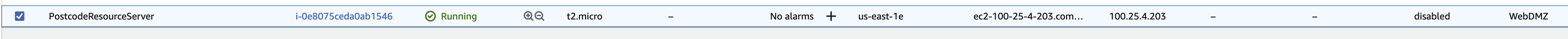
docker image push <REPOSITORY USERNAME>/postcode:latest

s

### Provision EC2 instance and deploy docker image

Note:

The pre-built docker image is used here  
  
https://hub.docker.com/repository/docker/patrick888/postcode

1. Provision the EC2 instance.  
     
     
     
   Make sure the security group of the instance has an inbound rule to HTTP, HTTPS and SSH.  
     
   A screenshot of a computer

   Description automatically generated with medium confidence
2. Install Docker runtime on the EC2 instance, pull the docker image from repository and run the image

sudo yum update -y

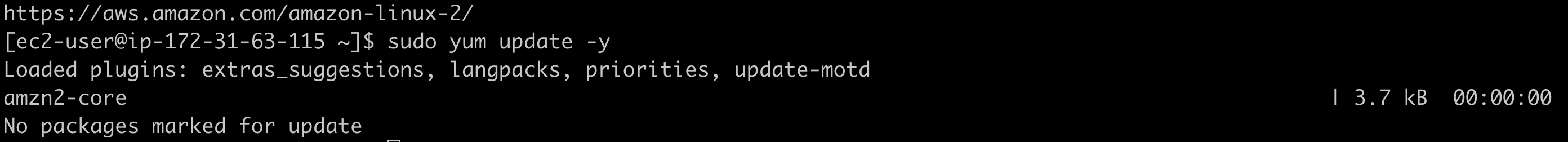
sudo yum install -y docker

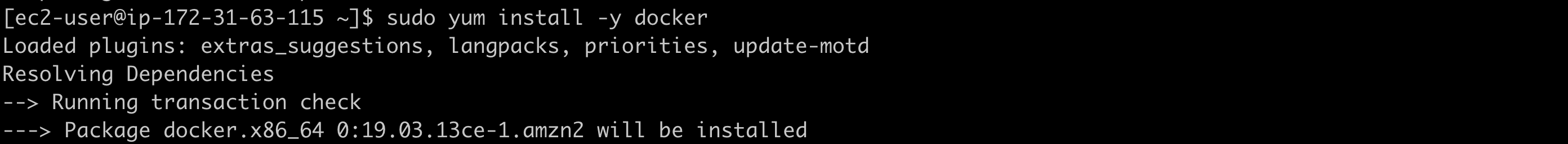
sudo usermod -aG docker ec2-user

sudo service docker start

sudo docker pull patrick888/postcode:latest

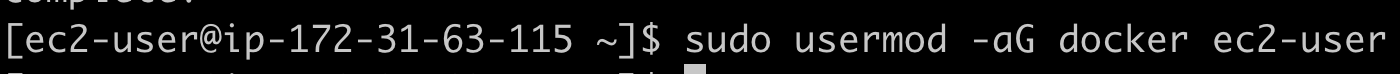
sudo docker run --rm -d -p 8080:8080 -p 8443:8443 -t patrick888/postcode:latest

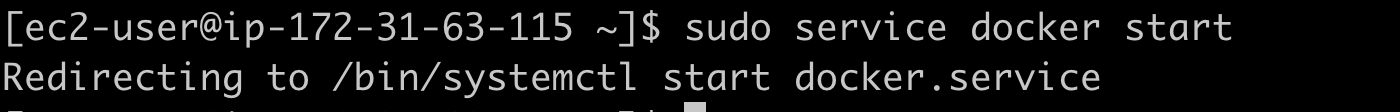




Text

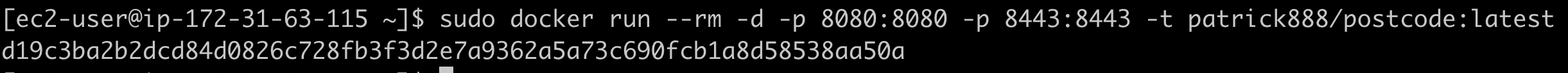
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Text

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1. Check that the application is running properly by accessing the health-check page

http://<Server URL>:8080/healthcheck.html

