

DOCKER

PROJECT HANDSON

HandsOn video-

<https://www.youtube.com/watch?v=5FfpNuk0sBg&t=4s>

Step1 - Take the EC2 Ubuntu instance from AWS with below configurations

Type - Ubuntu

Size - T2.Micro

GB - 8

Step 2 Install tools like

Maven -

```
sudo apt update -y
```

```
sudo apt install maven -y
```

```
mvn -version
```

Docker -

```
sudo apt update -y
```

```
sudo apt install apt-transport-https ca-certificates curl  
software-properties-common -y
```

```
curl -fsSL https://download.docker.com/linux/ubuntu/gpg  
| sudo apt-key add -
```

```
sudo add-apt-repository "deb [arch=amd64]  
https://download.docker.com/linux/ubuntu bionic stable"  
-y
```

```
sudo apt update -y
```

```
apt-cache policy docker-ce -y
```

```
sudo apt install docker-ce -y
```

```
#sudo systemctl status docker
```

```
sudo chmod 777 /var/run/docker.sock
```

Git

```
apt install git
```

Step 3 - Clone the code

```
git clone
```

```
https://github.com/DEVOPS-WITH-WEB-DEV/spring-cloud-kubernetes.git
```

Step 4 - Go over the docker file in above repo

<https://github.com/DEVOPS-WITH-WEB-DEV/spring-cloud-kubernetes/blob/main/kubernetes-configmap-reload/Dockerfile>

Step 5 - Build the code with maven

mvn clean install -DskipTests

```
at 1.3 MB/s)
Downloaded from central: https://repo.maven.apache.org/maven2/org/codehaus/plexus/plexus-utils/
r (239 kB at 1.4 MB/s)
[INFO] Installing /home/ubuntu/docker_demo/spring-cloud-kubernetes/kubernetes-configmap-reload/
eload-0.0.1-SNAPSHOT.jar to /root/.m2/repository/com/minikube/sample/kubernetes-configmap-reloa
onfigmap-reload-0.0.1-SNAPSHOT.jar
[INFO] Installing /home/ubuntu/docker_demo/spring-cloud-kubernetes/kubernetes-configmap-reload/
ry/com/minikube/sample/kubernetes-configmap-reload/0.0.1-SNAPSHOT/kubernetes-configmap-reload-0
[INFO] -----
[INFO] BUILD SUCCESS
[INFO] -----
[INFO] Total time: 40.608 s

drwxr-xr-x 8 root root 4096 Feb 15 14:59 target
root@ip-172-31-29-34:/home/ubuntu/docker_demo/spring-cloud-kubernetes/kubernetes-configmap-reload# cd target/
root@ip-172-31-29-34:/home/ubuntu/docker_demo/spring-cloud-kubernetes/kubernetes-configmap-reload/target# ls
classes                kubernetes-configmap-reload-0.0.1-SNAPSHOT.jar          maven-status
generated-sources      kubernetes-configmap-reload-0.0.1-SNAPSHOT.jar.original test-classes
generated-test-sources maven-archiver
root@ip-172-31-29-34:/home/ubuntu/docker_demo/spring-cloud-kubernetes/kubernetes-configmap-reload/target# ls -lrta
total 38620
drwxr-xr-x 5 root root    4096 Feb 15 14:58 ..
drwxr-xr-x 3 root root    4096 Feb 15 14:58 generated-sources
drwxr-xr-x 3 root root    4096 Feb 15 14:58 maven-status
drwxr-xr-x 3 root root    4096 Feb 15 14:58 classes
drwxr-xr-x 3 root root    4096 Feb 15 14:58 generated-test-sources
drwxr-xr-x 3 root root    4096 Feb 15 14:58 test-classes
drwxr-xr-x 2 root root    4096 Feb 15 14:59 maven-archiver
-rw-r--r-- 1 root root   6323 Feb 15 14:59 kubernetes-configmap-reload-0.0.1-SNAPSHOT.jar.original
drwxr-xr-x 8 root root    4096 Feb 15 14:59 .
-rw-r--r-- 1 root root 39501161 Feb 15 14:59 kubernetes-configmap-reload-0.0.1-SNAPSHOT.jar
root@ip-172-31-29-34:/home/ubuntu/docker_demo/spring-cloud-kubernetes/kubernetes-configmap-reload/target#
```

Step 6 - Go to project folder in Ubuntu where dockerfile is present

Step 7 - Run the below command to create the docker image

docker build -t bahubali/1:latest .

```
root@ip-172-31-29-34:/home/ubuntu/docker_demo/spring-cloud-kubernetes/kubernetes-configmap-reload# docker images
REPOSITORY    TAG       IMAGE ID       CREATED        SIZE
root@ip-172-31-29-34:/home/ubuntu/docker_demo/spring-cloud-kubernetes/kubernetes-configmap-reload# docker build -t bahubali/1:latest .
[+] Building 5.9s (7/7) FINISHED
=> [internal] load build definition from Dockerfile                                0.1s
=> => transferring dockerfile: 149B                                              0.0s
=> [internal] load .dockerignore                                                  0.1s
=> => transferring context: 2B                                                  0.0s
=> [internal] load metadata for docker.io/library/openjdk:8-jdk-alpine          1.1s
=> [internal] load build context                                                  1.4s
=> => transferring context: 39.51MB                                              1.4s
=> [1/2] FROM docker.io/library/openjdk:8-jdk-alpine@sha256:94792824df2df33402f201713f932b58cb9de94a0cd524164a0f2283 3.9s
=> => resolve docker.io/library/openjdk:8-jdk-alpine@sha256:94792824df2df33402f201713f932b58cb9de94a0cd524164a0f2283 0.1s
=> => sha256:c2274a1a0e2786ee9101b08f76111f9ab8019e368dce1e325d3c284a0ca33397 70.73MB / 70.73MB 1.9s
=> => sha256:94792824df2df33402f201713f932b58cb9de94a0cd524164a0f2283343547b3 1.64kB / 1.64kB 0.0s
=> => sha256:44b3cea369c947527e266275cee85c71a81f20fc5076f6ebb5a13f19015dce71 947B / 947B 0.0s
=> => sha256:a3562aa0b991a80cfe8172847c8be6dbf6e46340b759c2b782f8b8be45342717 3.40kB / 3.40kB 0.0s
=> => sha256:e7c96db7181be991f19a9fb6975cddb73c65f4a2681348e63a141a2192a5f10 2.76MB / 2.76MB 0.2s
=> => sha256:f910a506b6c1dbec766725d70356f695ae2bf2bea6224dbe8c7c6ad4f3664a2 238B / 238B 0.2s
=> => extracting sha256:e7c96db7181be991f19a9fb6975cddb73c65f4a2681348e63a141a2192a5f10 0.8s
```

```
=> => naming to docker.io/bahubali/2
root@ip-172-31-29-34:/home/ubuntu/docker_demo/spring-cloud-kubernetes/kubernetes-configmap-reload# docker images
REPOSITORY    TAG       IMAGE ID       CREATED        SIZE
bahubali/1    latest    b142872d6397   About a minute ago  144MB
bahubali/2    latest    b142872d6397   About a minute ago  144MB
bahubali      latest    b142872d6397   About a minute ago  144MB
root@ip-172-31-29-34:/home/ubuntu/docker_demo/spring-cloud-kubernetes/kubernetes-configmap-reload#
```

Step 7 - Run the below command to create the image into container

docker run -itd <imageID> --name chirutha

Here chirutha is container name

Imageid is from above screenshot

```
3
07c1cde6de00 b142872d6397 "/bin/sh -c 'exec ja..." 2 minutes ago Exited (130) About a minute ago chirutha
2
b88da0ecd040 b142872d6397 "/bin/sh -c 'exec ja..." 3 minutes ago Exited (130) 2 minutes ago chirutha
root@ip-172-31-29-34:/home/ubuntu/docker_demo/spring-cloud-kubernetes/kubernetes-configmap-reload# docker ps -a
CONTAINER ID   IMAGE          COMMAND                  CREATED        STATUS        PORTS   NAMES
6afb57fc2f8f   b142872d6397   "/bin/sh -c 'exec ja..." 12 seconds ago Up 11 seconds          chirutha
3
07c1cde6de00   b142872d6397   "/bin/sh -c 'exec ja..." 2 minutes ago   Exited (130) About a minute ago chirutha
2
b88da0ecd040   b142872d6397   "/bin/sh -c 'exec ja..." 4 minutes ago   Exited (130) 2 minutes ago chirutha
root@ip-172-31-29-34:/home/ubuntu/docker_demo/spring-cloud-kubernetes/kubernetes-configmap-reload#
```

Step 8 - Go inside the container and check the data

docker exec -it <containerID> /bin/sh

Step 9 - Check the app.jar file in docker

```
dr-xr-xr-x 176 root    root          0 Feb 15 15:23 proc
drwxr-xr-x  1 root    root        4096 Feb 15 15:23 etc
-rwxr-xr-x  1 root    root          0 Feb 15 15:23 .dockerenv
drwxr-xr-x  1 root    root        4096 Feb 15 15:23 ..
drwxr-xr-x  1 root    root        4096 Feb 15 15:23 .
drwxr-xr-x  5 root    root         360 Feb 15 15:23 dev
drwxrwxrwt  1 root    root        4096 Feb 15 15:23 tmp
drwx----- 1 root    root        4096 Feb 15 15:25 root
/ # ps ef | grep -i app.jar
  1 root      0:11 java -jar app.jar --info
 48 root      0:00 grep -i app.jar
/ # exit
```

