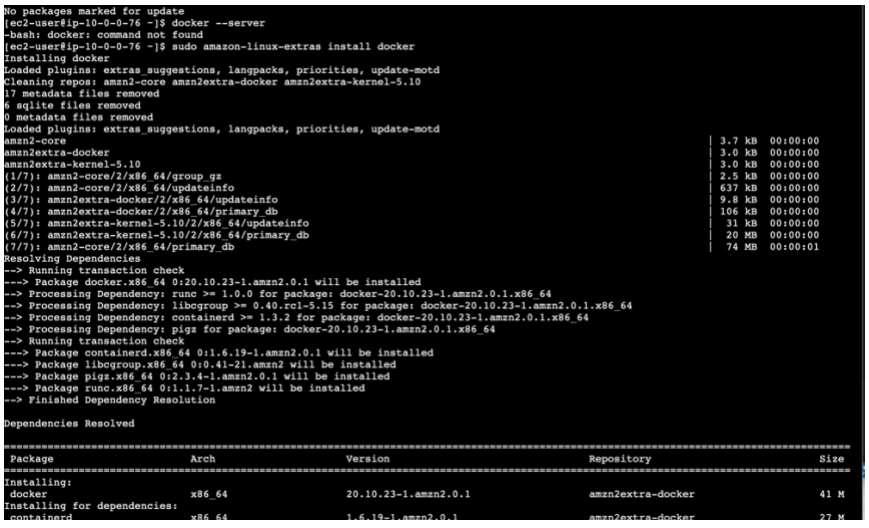
Docker project:

- Create a Docker hub public repository
- Containerize our Apache webserver
- Upload image to your docker hub
- Have a friend from your cluster to pull your image and build it.
- Share screenshot of app in browser, and image uploaded

1- Install docker on our cli



```
No packages marked for update
[ec2-user@ip-10-0-0-76 ~]$ docker --server
-bash: docker: command not found
[ec2-user@ip-10-0-0-76 ~]$ sudo amazon-linux-extras install docker
Installing docker
Loaded plugins: extras_suggestions, langpacks, priorities, update-motd
Cleaning repos: amzn2-core amzn2extra-docker amzn2extra-kernel-5.10
17 metadata files removed
6 sqlite files removed
0 metadata files removed
Loaded plugins: extras_suggestions, langpacks, priorities, update-motd
amzn2-core                                                                                                  | 3.7 kB  00:00:00
amzn2extra-docker                                                                                           | 3.0 kB  00:00:00
amzn2extra-kernel-5.10                                                                                      | 3.0 kB  00:00:00
(1/7): amzn2-core/2/x86_64/group_gz                                                                         | 2.5 kB  00:00:00
(2/7): amzn2-core/2/x86_64/updateinfo                                                                       | 637 kB  00:00:00
(3/7): amzn2extra-docker/2/x86_64/updateinfo                                                                | 9.8 kB  00:00:00
(4/7): amzn2extra-docker/2/x86_64/primary_db                                                                | 106 kB  00:00:00
(5/7): amzn2extra-kernel-5.10/2/x86_64/updateinfo                                                           |  31 kB  00:00:00
(6/7): amzn2extra-kernel-5.10/2/x86_64/primary_db                                                           |  20 MB  00:00:00
(7/7): amzn2-core/2/x86_64/primary_db                                                                       |  74 MB  00:00:01
Resolving Dependencies
--> Running transaction check
---> Package docker.x86_64 0:20.10.23-1.amzn2.0.1 will be installed
--> Processing Dependency: runc >= 1.0.0 for package: docker-20.10.23-1.amzn2.0.1.x86_64
--> Processing Dependency: libcgroup >= 0.40.rc1-5.15 for package: docker-20.10.23-1.amzn2.0.1.x86_64
--> Processing Dependency: containerd >= 1.3.2 for package: docker-20.10.23-1.amzn2.0.1.x86_64
--> Processing Dependency: pigz for package: docker-20.10.23-1.amzn2.0.1.x86_64
--> Running transaction check
---> Package containerd.x86_64 0:1.6.19-1.amzn2.0.1 will be installed
---> Package libcgroup.x86_64 0:0.41-21.amzn2 will be installed
---> Package pigz.x86_64 0:2.3.4-1.amzn2.0.1 will be installed
---> Package runc.x86_64 0:1.1.7-1.amzn2 will be installed
--> Finished Dependency Resolution

Dependencies Resolved

================================================================================================================================
 Package                  Arch                  Version                                Repository                          Size
================================================================================================================================
Installing:
 docker                   x86_64                20.10.23-1.amzn2.0.1                   amzn2extra-docker                   41 M
Installing for dependencies:
 containerd               x86_64                1.6.19-1.amzn2.0.1                     amzn2extra-docker                   27 M
```

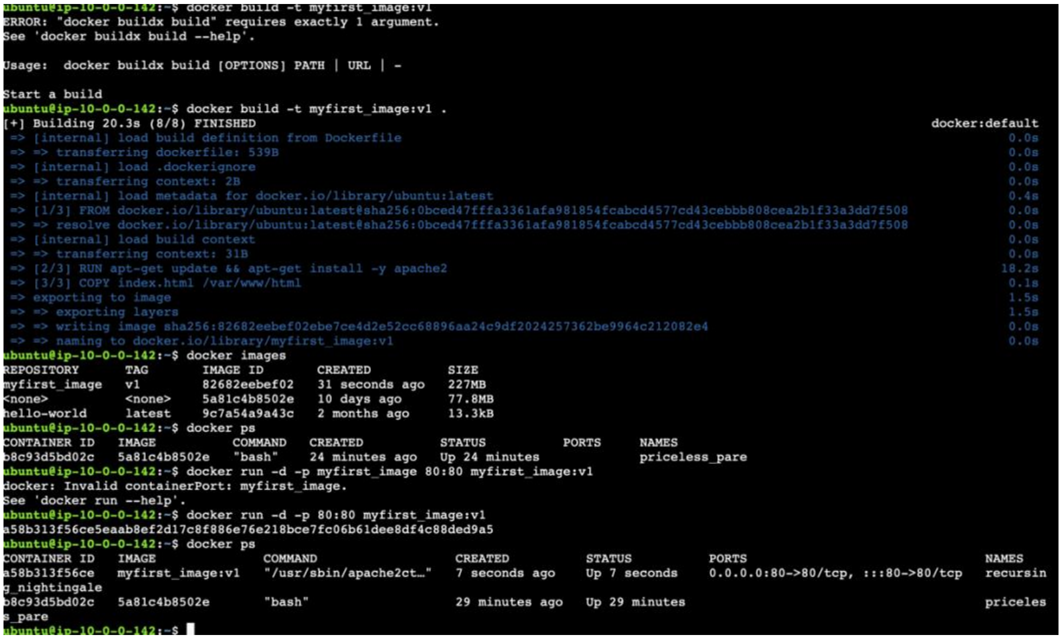
Since docker is installed, check status and start it

```
[ec2-user@ip-10-0-0-76 ~]$ sudo sudo servive docker status
sudo: servive: command not found
[ec2-user@ip-10-0-0-76 ~]$ sudo servive docker status
sudo: servive: command not found
[ec2-user@ip-10-0-0-76 ~]$ sudo service docker status
Redirecting to /bin/systemctl status docker.service
● docker.service - Docker Application Container Engine
   Loaded: loaded (/usr/lib/systemd/system/docker.service; disabled; vendor preset: disabled)
   Active: inactive (dead)
     Docs: https://docs.docker.com
[ec2-user@ip-10-0-0-76 ~]$ sudo service docker start
Redirecting to /bin/systemctl start docker.service
[ec2-user@ip-10-0-0-76 ~]$ sudo service docker status
Redirecting to /bin/systemctl status docker.service
● docker.service - Docker Application Container Engine
   Loaded: loaded (/usr/lib/systemd/system/docker.service; disabled; vendor preset: disabled)
   Active: active (running) since Sat 2023-07-08 23:45:38 UTC; 2min 26s ago
     Docs: https://docs.docker.com
  Process: 3599 ExecStartPre=/usr/libexec/docker/docker-setup-runtimes.sh (code=exited, status=0/SUCCESS)
  Process: 3598 ExecStartPre=/bin/mkdir -p /run/docker (code=exited, status=0/SUCCESS)
 Main PID: 3602 (dockerd)
    Tasks: 7
   Memory: 21.1M
   CGroup: /system.slice/docker.service
           └─3602 /usr/bin/dockerd -H fd:// --containerd=/run/containerd/containerd.sock --default-ulimit nofile=32768:65536

Jul 08 23:45:37 ip-10-0-0-76.ec2.internal dockerd[3602]: time="2023-07-08T23:45:37.729623244Z" level=info msg="ClientConn switch...=grpc
Jul 08 23:45:37 ip-10-0-0-76.ec2.internal dockerd[3602]: time="2023-07-08T23:45:37.768233899Z" level=warning msg="Your kernel do...ight"
Jul 08 23:45:37 ip-10-0-0-76.ec2.internal dockerd[3602]: time="2023-07-08T23:45:37.768698981Z" level=warning msg="Your kernel do...vice"
Jul 08 23:45:37 ip-10-0-0-76.ec2.internal dockerd[3602]: time="2023-07-08T23:45:37.769234496Z" level=info msg="Loading container...art."
Jul 08 23:45:38 ip-10-0-0-76.ec2.internal dockerd[3602]: time="2023-07-08T23:45:38.018670646Z" level=info msg="Default bridge (d...ress"
Jul 08 23:45:38 ip-10-0-0-76.ec2.internal dockerd[3602]: time="2023-07-08T23:45:38.078249865Z" level=info msg="Loading container...one."
Jul 08 23:45:38 ip-10-0-0-76.ec2.internal dockerd[3602]: time="2023-07-08T23:45:38.099729555Z" level=info msg="Docker daemon" co...10.23
Jul 08 23:45:38 ip-10-0-0-76.ec2.internal dockerd[3602]: time="2023-07-08T23:45:38.100236266Z" level=info msg="Daemon has comple...tion"
Jul 08 23:45:38 ip-10-0-0-76.ec2.internal systemd[1]: Started Docker Application Container Engine.
Jul 08 23:45:38 ip-10-0-0-76.ec2.internal dockerd[3602]: time="2023-07-08T23:45:38.128682113Z" level=info msg="API listen on /ru...sock"
Hint: Some lines were ellipsized, use -l to show in full.
[ec2-user@ip-10-0-0-76 ~]$
```

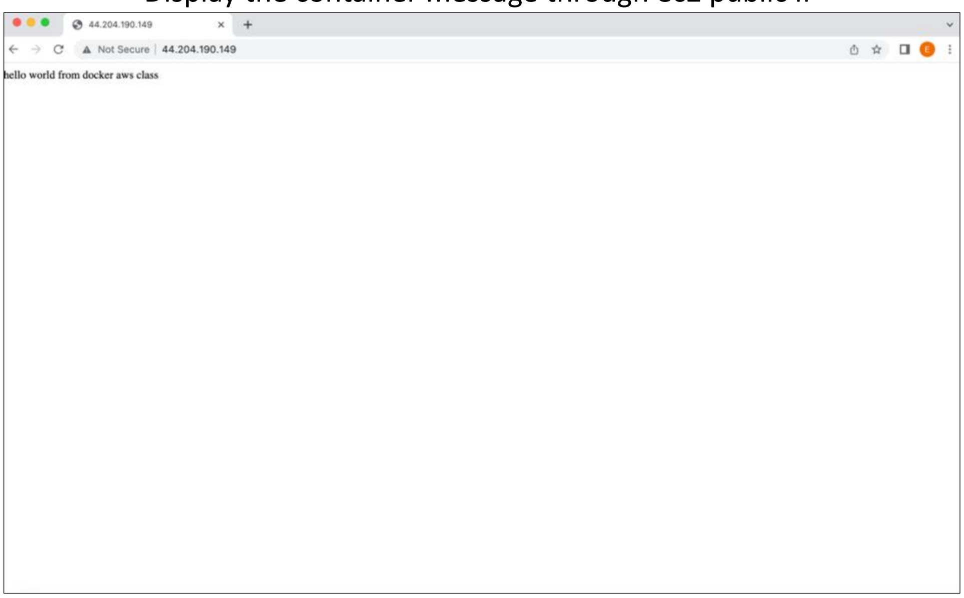
Built Dokerfile and index.html file

```
[ec2-user@ip-10-0-0-76 ~]$ vim Dockerfile
[ec2-user@ip-10-0-0-76 ~]$ cat Dockerfile
# specify a base image
From amazonlinux:2

# description
LABEL description="containainerize appache webapp"

LABEL maintainer="infrastructure as code best way to do it"

# run yum update
RUN yum -y update

# cpy index file from our computer to inside the container
COPY index.html /var/www/html

Expose 80

#install apache
RUN yum -y install httpd

# run httpd service when the container starts
ENTRYPOINT [ /usr/sbin/httpd ]
#can override cmd in the background
CMD [ "-D" , "FOREGROUND" ]
[ec2-user@ip-10-0-0-76 ~]$
```

Build and run docker image

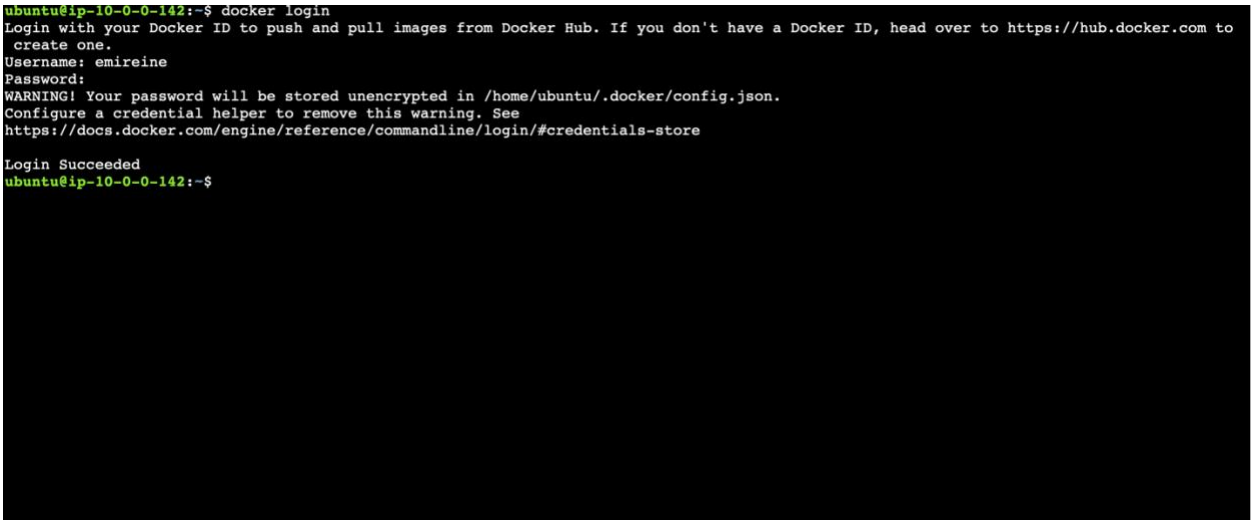


Display the container message through ec2 public IP

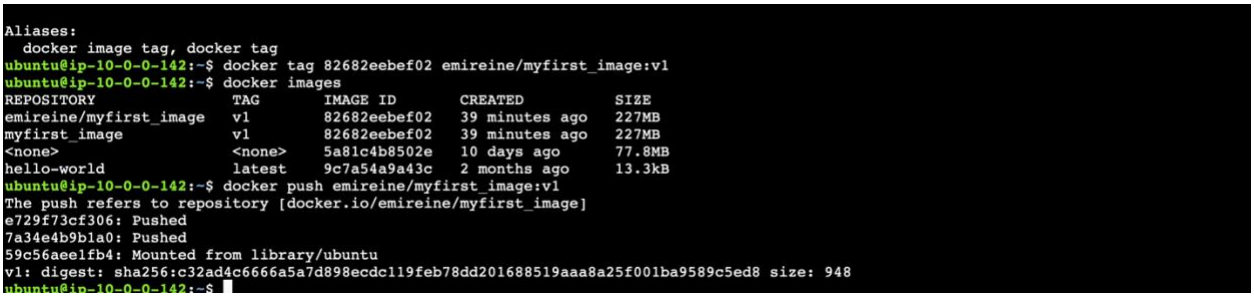


Store our image on registry using our dockerhub account

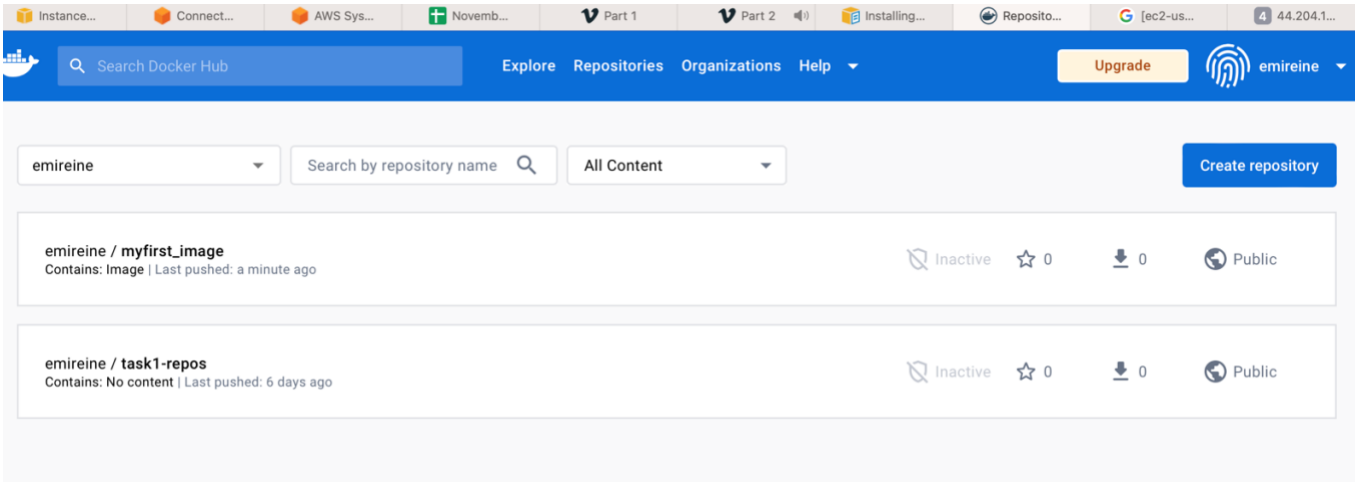
Loging into the image using our dockerhub credential



Since we loging into our dockerhub account via ec2 cli, lets tag and push the image



Our dockerhub repository


Instance...
Connect...
AWS Sys...
Novemb...
Part 1
Part 2
Installing...
Reposito...
[ec2-us...
44.204.1...
Search Docker Hub
Explore
Repositories
Organizations
Help
Upgrade
emireine
emireine
Search by repository name
All Content
Create repository
emireine / myfirst_image
Contains: Image | Last pushed: a minute ago
Inactive
0
0
Public
emireine / task1-repos
Contains: No content | Last pushed: 6 days ago
Inactive
0
0
Public