

Deploye Html file in Docker Container

What is Docker?

It is a software development tool and a virtualization technology that makes it easy to develop, deploy manage application by using container

What is Container?

It refers to a lightweight, standalone, executable package of a piece of software that contains all the libraries, configuration files, dependencies and other necessary parts to operate the application. Eg., Ubuntu +Python +Dependencies

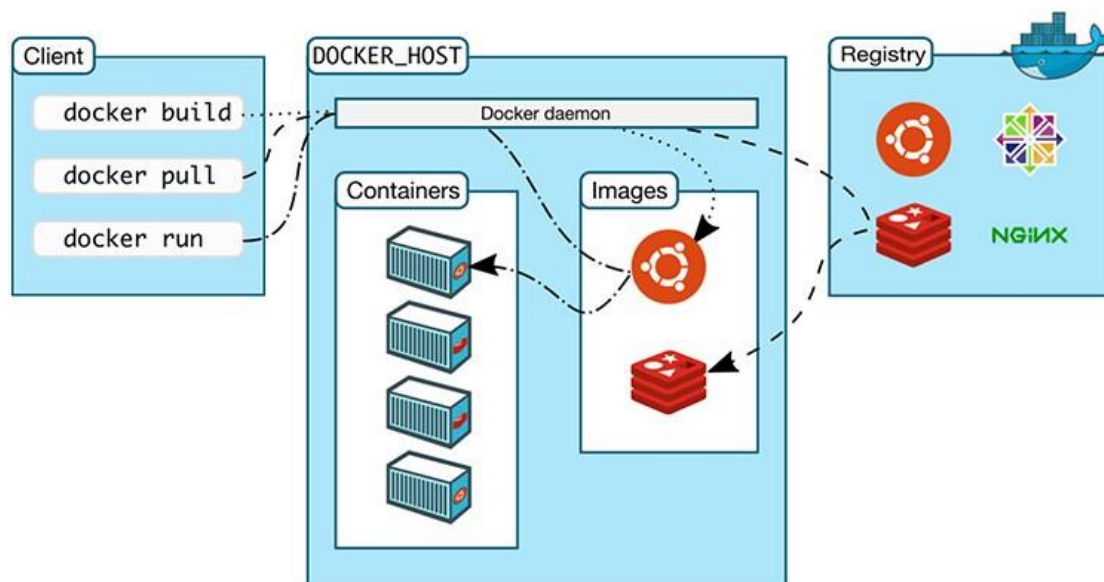
What is Docker Images?

It is static representation of the app or service and its configuration of the app or service and its configuration and dependencies. It is used to create Docker Containers. It is read-only immutable template that defines contains application binaries and dependencies. Docker Images are stored in the docker Registry.

What is Docker Container Lifecycle?

The Docker container lifecycle is the process of creating, running, stopping, and removing a Docker container:

- **Created:** The container is created from a Docker image
- **Running:** The container executes the commands in the image
- **Paused:** The container's current command is paused
- **Stopped:** The container's main process is gracefully shut down
- **Killed or deleted:** The container's main processes are abruptly shut down



Step 1:

- Launch Linux instance

EC2 > Instances > Launch an instance

Launch an instance

Amazon EC2 allows you to create virtual machines, or instances, that run on the AWS Cloud. Quickly get started by following the simple steps below.

Name and tags

Name

Add additional tags

Application and OS Images (Amazon Machine Image)

An AMI is a template that contains the software configuration (operating system, application server, and applications) required to launch your instance. Search or Browse for AMIs if you don't see what you are looking for below

Recents

Quick Start

Summary

Number of instances

Software Image (AMI)

Amazon Linux 2023 AMI 2023.6.2...read more
ami-0614680123427b75e

Virtual server type (instance type)

t2.micro

Firewall (security group)

New security group

Storage (volumes)

Cancel

Launch instance

Preview code

- After launch instance connect with putty

Dashboard

EC2 Global View

Events

Instances

Instances

Instance Types

Launch Templates

Spot Requests

Savings Plans

Reserved Instances

Dedicated Hosts

Capacity Reservations

Images

AMIs

AMI Catalog

Instances (1/2)

Last updated less than a minute ago

Connect

Instance state

Actions

Launch instances

All states

	Name	Instance ID	Instance state	Instance type	Status check	Alarm status
<input type="checkbox"/>	MyJavaapp-env1	i-004fd0412d08f344a	Terminated	t3.micro	-	View alarms +
<input checked="" type="checkbox"/>	myLinux	i-052eafb8101721f69	Running	t2.micro	2/2 checks passed	View alarms +

i-052eafb8101721f69 (myLinux)

Details

Status and alarms

Monitoring

Security

Networking

Storage

Tags

Instance summary

Instance ID

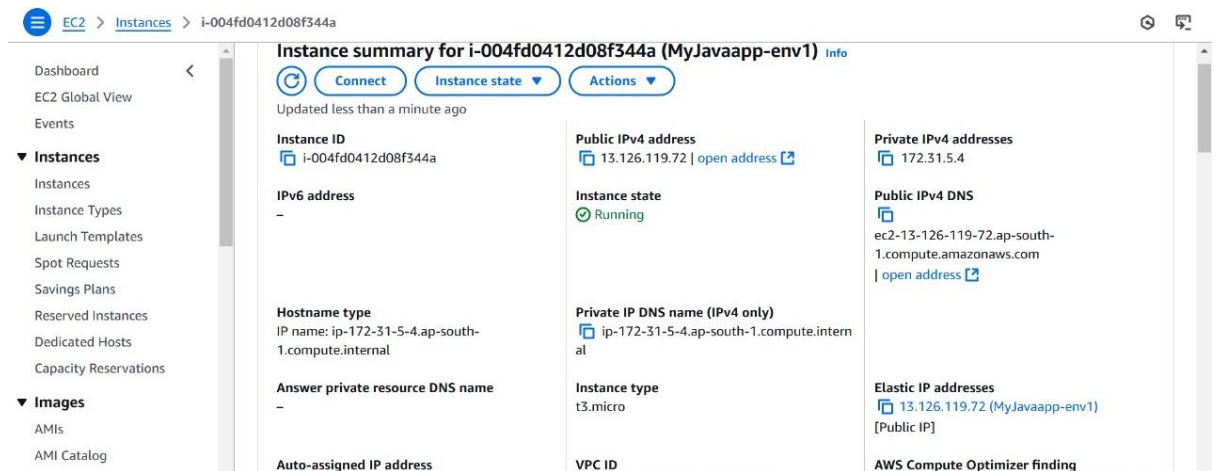
i-052eafb8101721f69

Public IPv4 address

13.203.66.238 | open address

Private IPv4 addresses

172.31.9.194



commands:

sudo su

yum update -y

yum install docker



service docker status--> to check status of docker

press q to quit

service docker start --> to start docker

service docker status --> it will show active

docker images [to list all docker images available in instance]

search 'docker hub' on google--> search ubuntu and copy the command
and paste in putty-->
command-- docker pull ubuntu

vi index.html [for creating index.html]

<h1>Hello from docker</h1>

to quit press ecs+ :wq

cat index.html

```
trigger@ip-172-31-9-194 ec2-user:~$ docker pull ubuntu
Docs: https://docs.docker.com
[root@ip-172-31-9-194 ec2-user]# service docker start
Redirecting to /bin/systemctl start docker.service
[root@ip-172-31-9-194 ec2-user]# 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; preset: disabled)
   Active: active (running) since Wed 2024-12-04 11:07:23 UTC; 25s ago
   TriggeredBy: • docker.socket
   Docs: https://docs.docker.com
   Process: 26851 ExecStartPre=/bin/mkdir -p /run/docker (code=exited, status=0/SUCCESS)
   Process: 26856 ExecStartPre=/usr/libexec/docker/docker-setup-runtimes.sh (code=exited, status=0/SUCCESS)
   Main PID: 26861 (dockerd)
   Tasks: 7
   Memory: 30.2M
   CPU: 261ms
   CGroup: /system.slice/docker.service
           └─26861 /usr/bin/dockerd -H fd:// --containerd=/run/containerd/containerd.sock --default-ulimit nfile=32768:65536

Dec 04 11:07:22 ip-172-31-9-194.ap-south-1.compute.internal systemd[1]: Starting docker.service - Docker Application Container Engine...
Dec 04 11:07:22 ip-172-31-9-194.ap-south-1.compute.internal dockerd[26861]: time="2024-12-04T11:07:22.566464060Z" level=info msg="Starting up"
Dec 04 11:07:22 ip-172-31-9-194.ap-south-1.compute.internal dockerd[26861]: time="2024-12-04T11:07:22.612334335Z" level=info msg="Loading containers: start."
Dec 04 11:07:23 ip-172-31-9-194.ap-south-1.compute.internal dockerd[26861]: time="2024-12-04T11:07:23.017896694Z" level=info msg="Loading containers: done."
Dec 04 11:07:23 ip-172-31-9-194.ap-south-1.compute.internal dockerd[26861]: time="2024-12-04T11:07:23.036534716Z" level=info msg="Docker daemon" commit=b08a5
Dec 04 11:07:23 ip-172-31-9-194.ap-south-1.compute.internal dockerd[26861]: time="2024-12-04T11:07:23.036767146Z" level=info msg="Daemon has completed initialization"
Dec 04 11:07:23 ip-172-31-9-194.ap-south-1.compute.internal dockerd[26861]: time="2024-12-04T11:07:23.066367509Z" level=info msg="API listen on /run/docker.sock"
Dec 04 11:07:23 ip-172-31-9-194.ap-south-1.compute.internal systemd[1]: Started docker.service - Docker Application Container Engine.
[root@ip-172-31-9-194 ec2-user]# docker images
REPOSITORY TAG IMAGE ID CREATED SIZE
[root@ip-172-31-9-194 ec2-user]# docker pull ubuntu
Using default tag: latest
latest: Pulling from library/ubuntu
da4ab26507a: Pull complete
Digest: sha256:80dd3c3b966cecb9f1667e9290b3bc61b78c2678c02cbdae5f0fea92cc6734ab
Status: Downloaded newer image for ubuntu:latest
docker.io/library/ubuntu:latest
[root@ip-172-31-9-194 ec2-user]# vi index.html
[root@ip-172-31-9-194 ec2-user]# cat index.html
<html>
<h1>Hello from docker</h1>
</html>
[root@ip-172-31-9-194 ec2-user]#
```

docker images

vi Dockerfile

FROM ubuntu

RUN apt update -y

RUN apt-get install apache2 -y

COPY index.html /var/www/html

EXPOSE 80

CMD ["apachectl", "-D", "FOREGROUND"]

```
FROM ubuntu
RUN apt-get update -y
RUN apt-get install apache2 -y
COPY index.html /var/www/html
EXPOSE 80
CMD ["apache2ctl", "-D", "FOREGROUND"]
```

cat Dockerfile

```
docker build -t img1:v1 .
```

docker images

```
docker run -p 80:80 imageid
```

```

root@ip-172-31-9-194/home/ec2-user#
# Pull complete
Digest: sha256:6dad3139c66eb9f1667e9290b3bc61b78c2678c02cbdae5f0fea92cc6734ab
Status: Downloaded newer image for ubuntu:latest
docker.io/library/ubuntu:latest
[root@ip-172-31-9-194 ec2-user]# vi index.html
[root@ip-172-31-9-194 ec2-user]# cat index.html
<html>
  <h1>Hello from docker</h1>
</html>

[root@ip-172-31-9-194 ec2-user]# vi Dockerfile
[root@ip-172-31-9-194 ec2-user]# cat Dockerfile
FROM ubuntu
RUN apt update -y
RUN apt-get install apache2 -y
COPY index.html /var/www/html
EXPOSE 80
CMD ["apachectl", "-D", "FOREGROUND"]

[root@ip-172-31-9-194 ec2-user]# docker build -t img1:v1 .
v1 Building 24.0s (9/9) FINISHED

# Run the container
root@ip-172-31-9-194 ec2-user# docker run --name myapache2 img1:v1
docker:default
# Inspect the container
root@ip-172-31-9-194 ec2-user# docker inspect myapache2
[{"Name": "/myapache2", "Architecture": "amd64", "ContainerID": "f2d095661519", "Parent": "f2d095661519", "Image": "img1:v1", "Labels": {}, "Mounts": [{"Type": "bind", "Source": "/var/www/html", "Destination": "/var/www/html", "Mode": "rw"}], "NetworkSettings": {"Networks": {"bridge": {"IPAddress": "172.17.0.2", "Gateway": "172.17.0.1", "Subnet": "172.17.0.0/16", "MacAddress": "02:42:9d:6b:15:19"}}, "Ports": {"80/tcp": [{"HostPort": null, "ContainerPort": 80}]}}, "State": {"Status": "running", "Running": true, "Paused": false, "Restarting": false, "OOMKilled": false, "Dead": false, "Pid": 1, "ExitCode": 0, "Error": "", "StartedAt": "2024-03-14T14:14:14.111Z", "FinishedAt": "2024-03-14T14:14:14.111Z", "Waiting": null, "Health": null}}}
root@ip-172-31-9-194 ec2-user# docker images
REPOSITORY TAG IMAGE ID CREATED SIZE
img1 v1 f2d095661519 16 seconds ago 228MB
ubuntu latest b1add0ba015 2 weeks ago 78.1MB
root@ip-172-31-9-194 ec2-user# docker run -p 80:80 f2d095661519
M005581: apache2: Could not reliably determine the server's fully qualified domain name, using 172.17.0.2. Set the 'ServerName' directive globally to suppress
this message

```

