January 2019

23 Wednesday

2018 DECEMBER

S	M	T	W	T	F	S
30	31					1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29

Docker

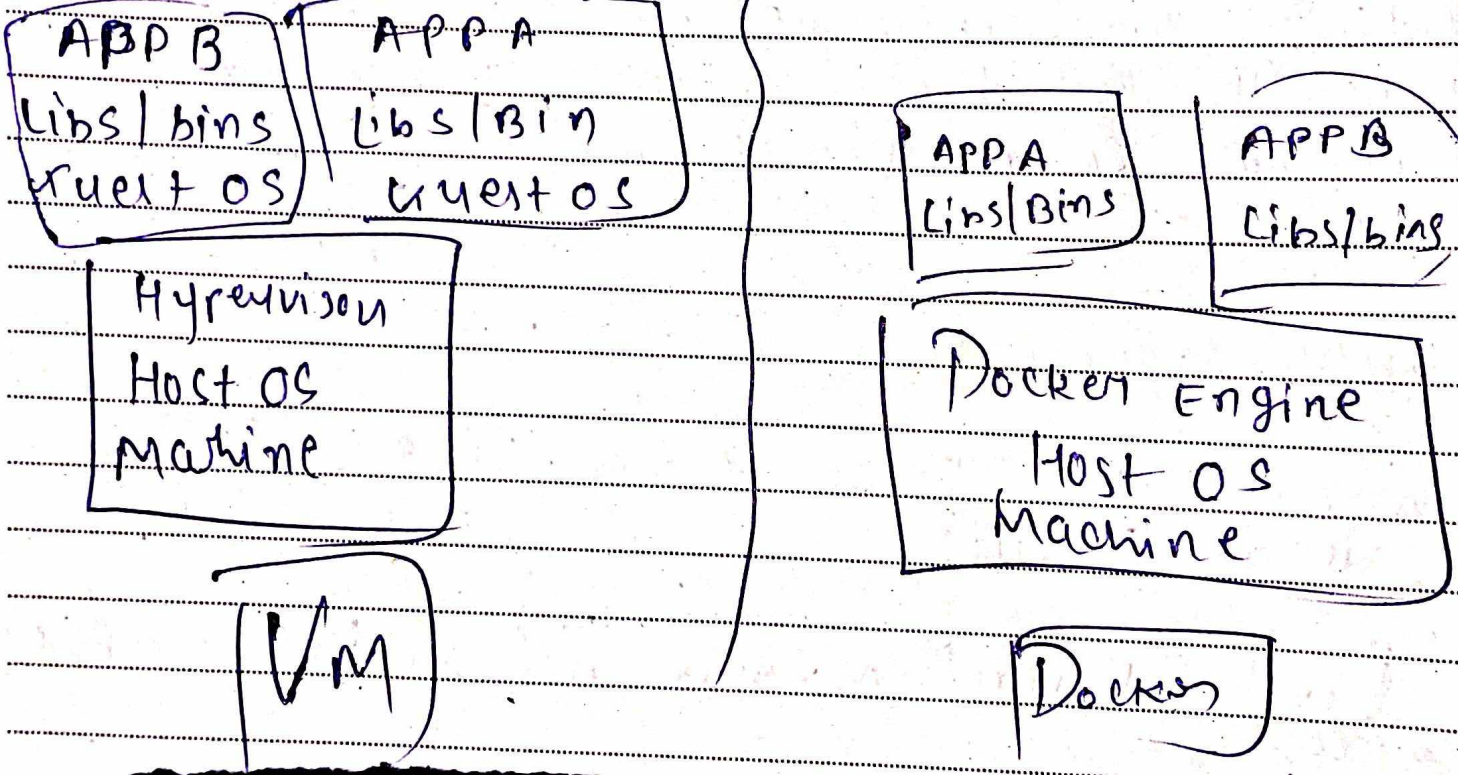
Docker is an open-source Plat form, that allows you to automate the deployment, scaling and management of applications using containerization

* Virtual machine

VM act like separate computer inside your Computer

→ Each Virtual machine behaves like a seperate Computer

Docker over VM's



January 2019

19 Saturday

2018 DECEMBER

S	M	T	W	T	F	S
30	31					1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29

VM	Docker
Large	Lightweight
Longer boot time	Almost instant startup
Utilize more system resource	Utilizes fewer system resources.
Strong isolation	isolated but shares Host os kernel
Portable	Highly portable

FEBRUARY

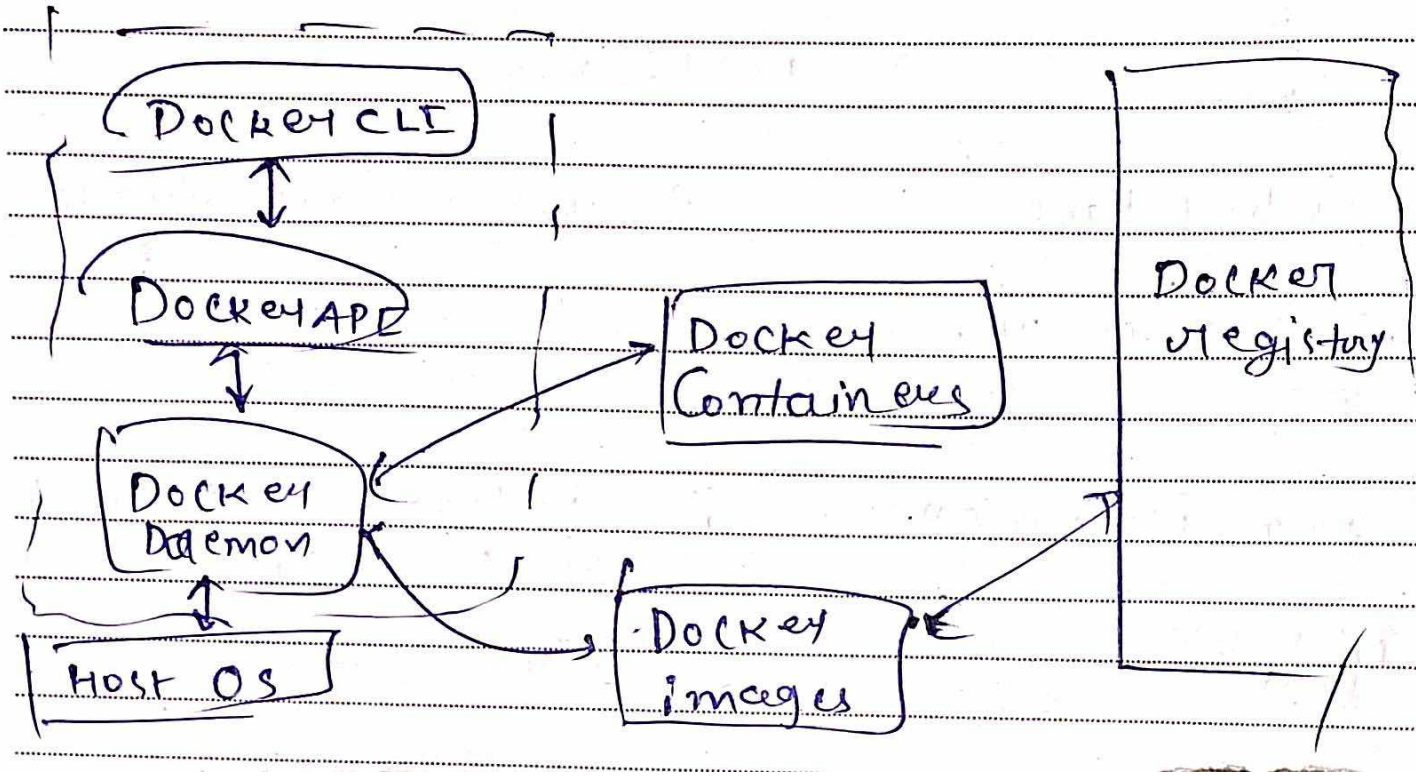
				T	F	S
					1	2
				7	8	9
			13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28		

Docker Architecture

January 2019

Thursday 17

Docker Engine



January 2019

15 Tuesday

2018 DECEMBER

S	M	T	W	T	F	S
30	31					1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29

Docker image:- are template that Define the Container and its dependencies.

Containers: Containers are runtime environments created from Docker images.

Engine: - runtime that manages Containers

Docker File - Instruction to build a Docker Image

FEBRUARY

	T	W	T	F	S
				1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28		

January 201

Sunday 1

Docker Hub :- Cloud based registry that hast Vast Collections of Docker images

February 2019

15 Friday

2019 JANUARY

S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

Docker registry

It is a storage and distribution system for named Docker images.

Importance

- Centralized Resource
- Easy Versioning
- Share your Docker images

019 MARCH

	M	T	W	T	F	S
					1	2
	4	5	6	7	8	9
	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

February 20

Wednesday

Different Docker Registry

Amazon
- Amazon elastic Container Registry

Google
- Artifact registry

Azure
- Azure Container registry

Docker Hub

February 2019

11 Monday

2019 JANUARY

S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

Docker file

```
FROM openjdk:11
VOLUME /tmp
ADD target\my-app.jar my-app.jar
EXPOSE 8080

ENTRYPOINT ["java", "-jar", "my-app.jar"]
```

2019 MARCH

S	M	T	W	T	F	S
31					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

February 2

Saturday

Spring boot with Docker

- No Dockerfile
- Sensible Defaults
- Consistent environment
- Security
- Saving and Efficiency
- Ease of use

Command

./mvnw spring-boot:build-image

"-D Spring-boot.build-image.image Name = <name>"

February 2019

7 Thursday

2019 JANUARY

S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

And Docker Push

Docker Commands

→ docker pull <image>

→ docker push <username/image>

→ docker run -it -d -p <host-port>:<Container-port>

-d → detach Mode

* --name <name> <image>

2019 MARCH

S	M	T	W	T	F	S
31					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

February 2

Tuesday

→docker stop <container-id/name>

→docker start <container-id/name>

docker ps

docker ps -a

docker images

February 2019

Sunday

2019 JANUARY

S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

→ docker exec -it <container name/id> bash

→ docker build -t <username/image> .

→ docker logs <container-name/id>

inspect

Docker file

From Node

ENV MONGO_DB_USERNAME =admin

ENV MONGO_DB_PASSWD =password

RUN mkdir -p /home/app

(RUN → execute any Linux Commands)

COPY . /home/app

Host container

January 2019

31 Thursday

2018 DECEMBER

S	M	T	W	T	F	S
30	31					1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29

CMD ["node", "server.js"]

↳ entryPoint Command

volumns:

— — : —

↓ host ↓ container