

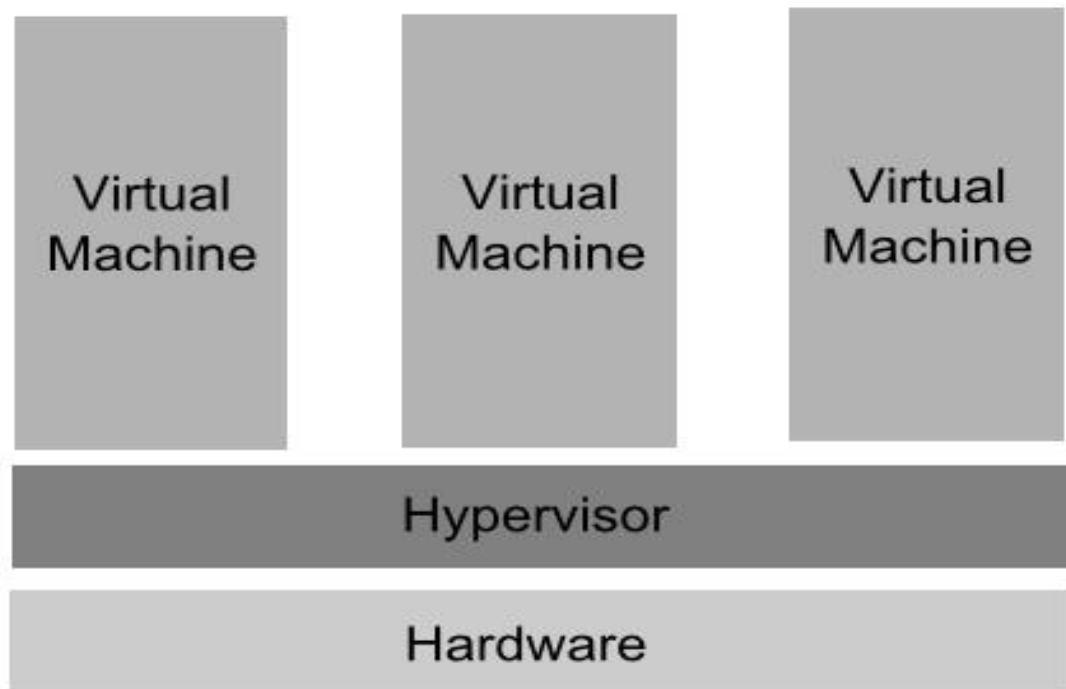


docker

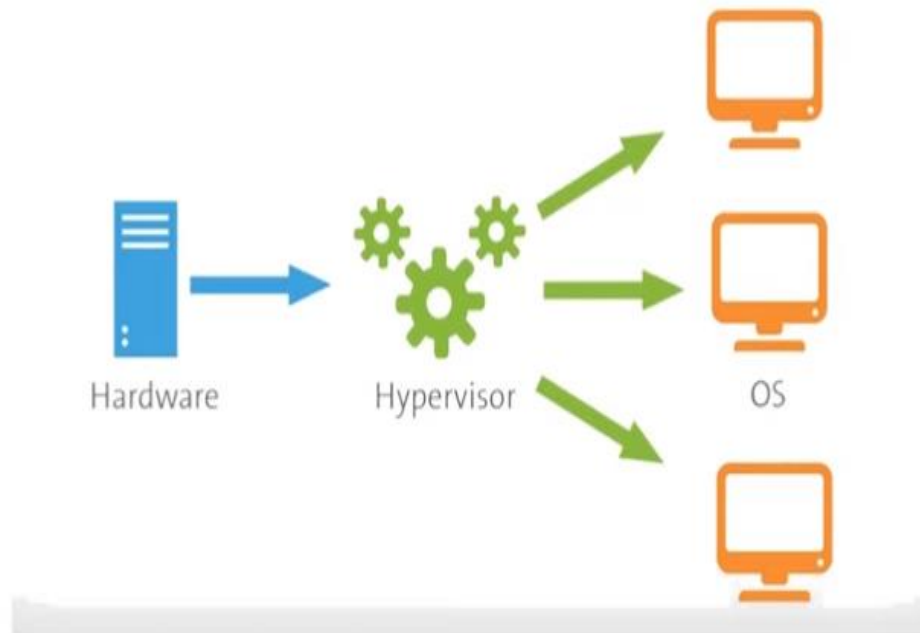
# INTERVIEW QUESTIONS

# What is Virtualizations

- Virtualization is the creation of a virtual (rather than physical) version of an IT environment, including an operating system (OS), a storage device, etc.
- Virtualization takes place on the same hardware platform after installing specific software - hypervisor



# What is Hypervisor?

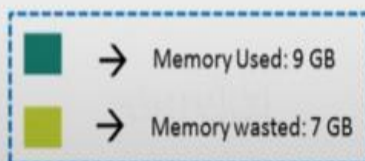
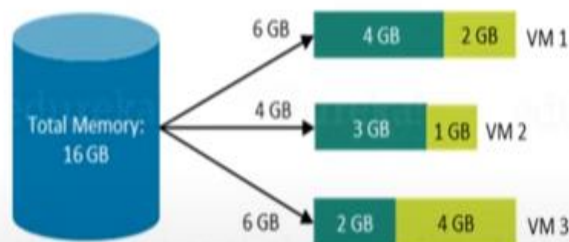


## What is containerization?

*So basically, an application that is being developed and deployed is bundled and wrapped together with all its configuration files and dependencies. This bundle is called a container.*

## Difference between virtualization and containerization

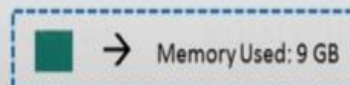
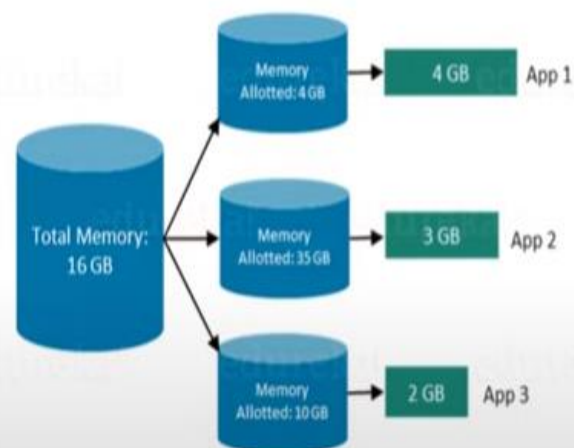
### In case of Virtual Machines



7 Gb of Memory is blocked and cannot be allotted to a new VM

### In case of Docker

edureka!



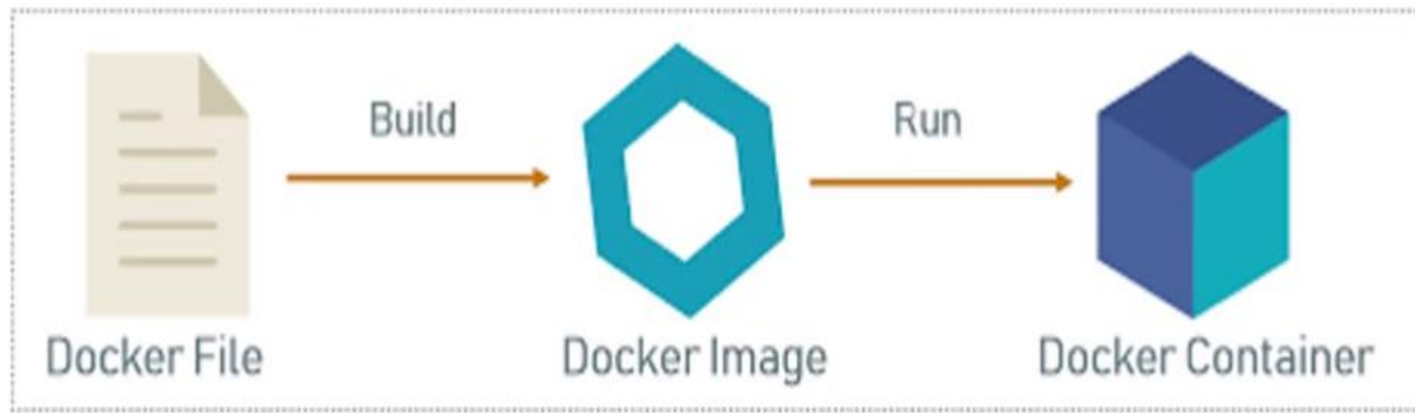
Only 9 GB memory utilized;  
7 GB can be allotted to a new Container



*Docker is a containerization platform which packages your application and all its dependencies together in the form of containers so as to ensure that your application works seamlessly in any environment, be it development, test or production*

*Docker containers include the application and all of its dependencies. It shares the kernel with other containers, running as isolated processes in user space on the host operating system.*

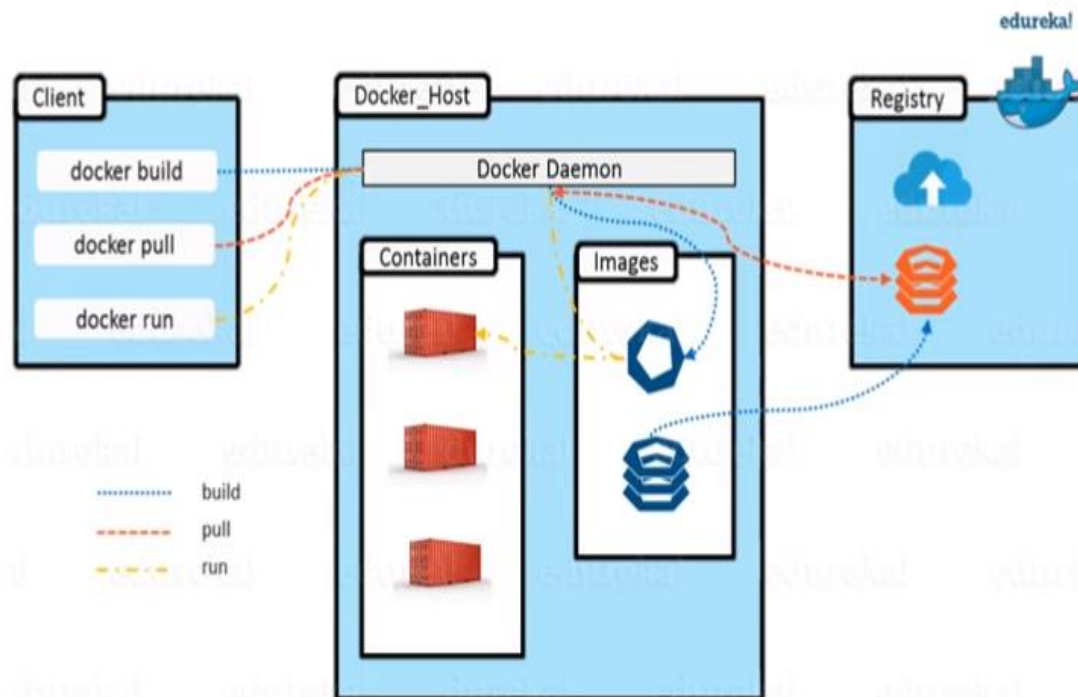
## What are Docker Images?





*Docker images create docker containers. There has to be a registry where these docker images live. This registry is Docker Hub.*

## Explain Docker Architecture



*Docker can build images automatically by reading the instructions from a file called Dockerfile. A Dockerfile is a text document that contains all the commands a user could call on the command line to assemble an image.*

## Tell us something about Docker Compose.

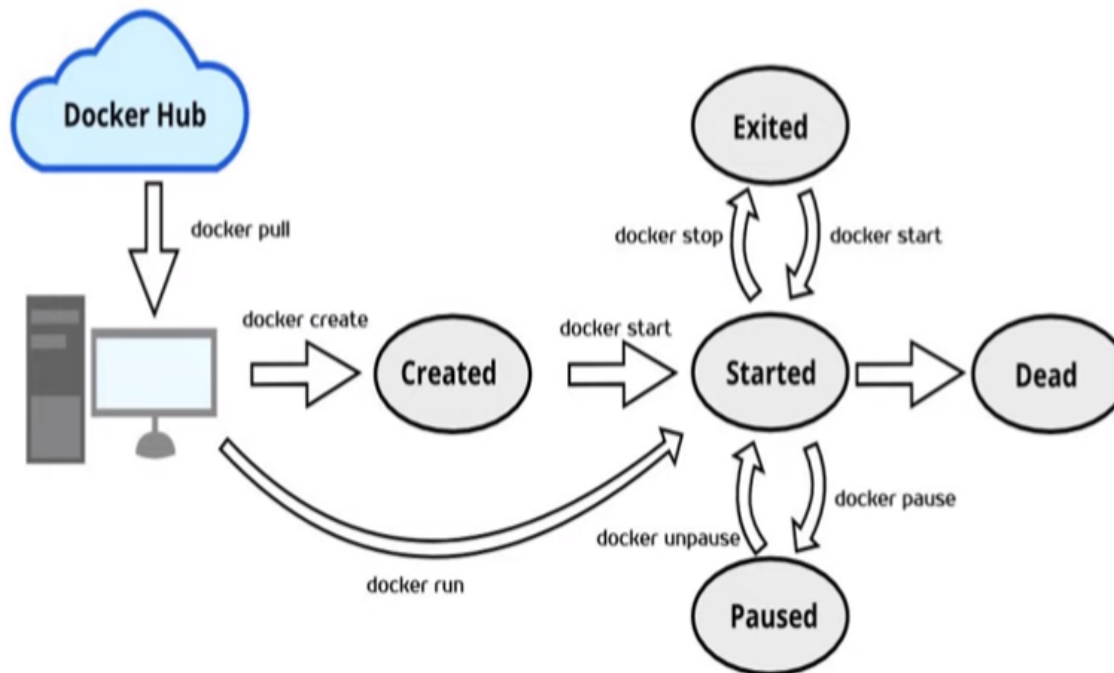
*Docker Compose is a YAML file which contains details about the services, networks, and volumes for setting up the Docker application.*

*Docker Swarm is native clustering for Docker. It turns a pool of Docker hosts into a single, virtual Docker host.*

## What is a Docker Namespace?

*A namespace is one of the Linux features and an important concept of containers. Namespace adds a layer of isolation in containers.*

## What is the lifecycle of a Docker Container?



## What is Docker Machine?

*Docker machine is a tool that lets you install Docker Engine on virtual hosts.*



*The following command gives you information about Docker Client and Server versions:*

*\$ docker version*

## 17 How do you get the number of containers running, paused and stopped?

*You can use the following command to get detailed information about the docker installed on your system.*

```
$ docker info
```

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If you vaguely remember the command and you'd like to confirm it, how will you get help on that particular command?

*The following command is very useful as it gives you help on how to use a command, the syntax, etc.*

*\$ docker --help*

*You can use the following command to login into [hub.docker.com](https://hub.docker.com):*

```
$ docker login
```

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If you wish to use a base image and make modifications or personalize it, how do you do that?

*It's one simple command to pull an image from docker hub:*

```
$ docker pull <image_name>
```

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How do you create a docker container from an image?

*Use the following command:*

```
$ docker run -it -d <image_name>
```

## How do you list all the running containers?

*The following command lists down all the running containers:*

```
$ docker ps
```

## How do you access a running container?

*The following command lets us access a running container:*

```
$ docker exec -it <container id> bash
```



## How to start, stop and kill a container?

```
$ docker start <container_id>  
$ docker stop <container_id>  
$ docker kill <container_id>
```

25

Can you use a container, edit it, and update it?

```
$ docker commit <container id> <username/imagename>
```

26 Once you've worked with an image, how do you push it to docker hub?

```
$ docker push <username/image name>
```

27

How to delete a stopped container?

```
$ docker rm <container id>
```

28

How to delete an image from the local storage system?

```
$ docker rmi <image-id>
```

*Once you've written a Dockerfile, you need to build it to create an image with those specifications. Use the following command to build a Dockerfile:*

```
$ docker build <path to docker file>
```

30 Do you know why docker system prune is used? What does it do?

*\$ docker system prune*

31

Will you lose your data, when a docker container exits?

*No, you won't lose any data when Docker container exits. Any data that your application writes to the container gets preserved.*



## Where all do you think Docker is being used?

- *Simplifying configuration*
- *Code Pipeline Management*
- *Developer Productivity*
- *Application Isolation*
- *Debugging Capabilities*
- *Multi-tenancy*
- *Rapid Deployment*

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How is Docker different from other containerization methods?

*Docker containers are very easy to deploy in any cloud platform. It can get more applications running on the same hardware when compared to other technologies*

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Can I use JSON instead of YAML for my compose file in Docker?

*Yes, you can use JSON instead of YAML for your compose file*

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How have you used Docker in your previous position?

*If you have no past practical experience in Docker and instead have experience with other tools in a similar space, be honest and explain the same.*

35

How far do Docker containers scale? Are there any requirements for the same?

*Large web deployments like Google and Twitter and platform providers such as Heroku and dotCloud, all run on container technology*

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## What platforms does docker run on?

*This is a very straightforward question but can get tricky. Do some company research before going for the interview and find out how the company is using Docker.*

38

Is there a way to identify the status of a Docker container?

*There are six possible states a container can be at any given point – Created, Running, Paused, Restarting, Exited, Dead.*

39

Can you remove a paused container from Docker?

*The answer is no. You cannot remove a paused container. The container has to be in the stopped state before it can be removed.*



## Can a container restart by itself?

*No, it's not possible for a container to restart by itself. By default the flag `-restart` is set to false.*

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Is it better to directly remove the container using the rm command or stop the container followed by remove container?

*Its always better to stop the container and then remove it using the remove command.*

```
$ docker stop <container_id>
```

```
$ docker rm -f <container_id>
```

## Will cloud overtake the use of Containerization?

*Docker containers are gaining popularity but at the same time, Cloud services are giving a good fight. In my personal opinion, Docker will never be replaced by Cloud.*

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## How many containers can run per host?

*There can be as many containers as you wish per host. Docker does not put any restrictions on it.*

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Is it a good practice to run stateful applications on Docker?

*The concept behind stateful applications is that they store their data onto the local file system.*

45

Will docker compose wait for the current container to be ready to move to the running of the next service?

*Docker compose always runs in the dependency order.*

## How will you monitor Docker in production?

*Docker provides functionalities like docker stats and docker events to monitor docker in production.*

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Is it a good practice to run Docker compose in production?

*Yes, using docker compose in production is the best practical application of docker compose.*

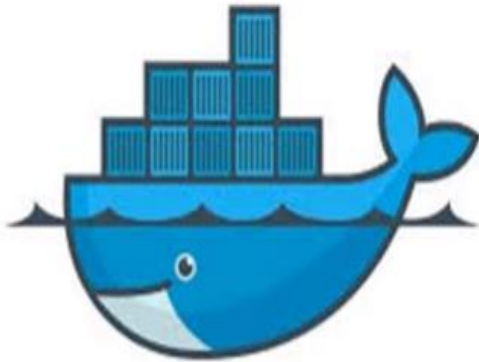


What changes are expected in your docker compose file while moving it to production?

- *Remove volume bindings.*
- *Binding to different ports on the host*
- *Specify a restart policy.*
- *Add extra services like log aggregator*

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Have you used Kubernetes? If you have, which one would you prefer amongst Docker and Kubernetes?



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Are you aware of load balancing across containers and hosts? How does it work?

*While using docker service with multiple containers across different hosts, you come across the need to load balance the incoming traffic. Load balancing and HAProxy is basically used to balance the incoming traffic across different available(healthy) containers.*