

DOCKER

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WHAT IS DOCKER ?

Docker is a open platform for developing , shipping and running applications . Docker enables you to separate your applications from your infrastructure so you can deliver software quickly. With Docker, you can manage your infrastructure in the same ways you manage your applications. By taking advantage of Docker's methodologies for shipping ,testing , and deploying code quickly , you can significantly reduce the delay between writing code and running it in production.

WHAT MAKES A DOCKER PLATFORM ?

A decorative green geometric shape, resembling a stylized arrow or a folded piece of paper, is located on the left side of the slide.

DOCKER ENGINE + DOCKER HUB = DOCKER PLATFORM



WHAT IS DOCKER IMAGE ?

DOCKER IMAGE IS MADE UP OF A COLLECTION OF FILES THAT BUNDLE TOGETHER ALL THE ESSENTIALS SUCH AS INSTALLATIONS, APPLICATION CODE , AND DEPENDENCIES REQUIRED TO CONFIGURE A FULLY OPERATIONAL DOCKER CONTAINER.

COMMAND TO RUN A IMAGE:

1. `docker pull image_name` ---> pulls the image from docker hub
2. `docker run -it -d image_name` → runs the image to form a container



WHAT IS DOCKER CONTAINER ?

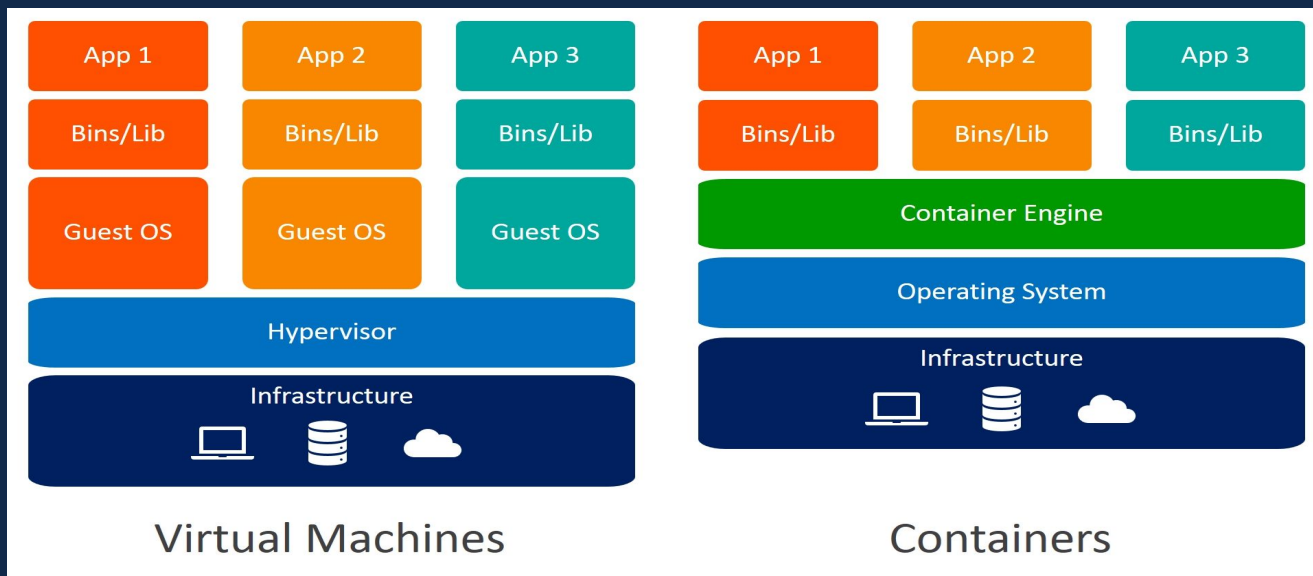
A DOCKER CONTAINER IMAGE IS A LIGHTWEIGHT , STANDALONE , EXECUTABLE PACKAGE OF SOFTWARE THAT INCLUDES EVERYTHING NEEDED TO RUN AN APPLICATION : CODE , RUN TIME , SYSTEM TOOLS , SYSTEM LIBRARIES , SETTINGS ETC...

COMMAND TO RUN A CONTAINER :

1. `docker ps -a` ---> shows all the list of containers
2. `Docker exec -it container_id bash` ---> accessing a running container

DIFFERENCE BETWEEN VM AND DOCKER CONTAINERS

1. VM virtualizes the hardware.
2. Docker virtualizes the Operating System .





LIVE DEMONSTRATION OF LINUX CONTAINERS AND APACHE :

1. HOW TO PULL A IMAGE FROM DOCKER HUB
2. HOW TO RUN THE IMAGE.
3. HOW TO ACCESS A CONTAINER.
4. HOW TO PERFORM SOME ACTIONS INSIDE THE CONTAINER.
5. HOW TO EXIT FROM THE CONTAINER.

BASIC COMMANDS:

1. `docker images` ---> gives all the list of images.
2. `docker pull name_image` ---> pulls the image from docker hub.
3. `docker rmi name_image` ---> removes/deletes the image .
4. `docker ps` ---> lists all the containers.
5. `docker run` ---> runs the image to create container .
6. `docker exec -it container_id` ---> enter inside the container.
7. `docker stop container_id` ---> to stop the container.
8. `docker stats` ---> displays the disk usage for the containers .

REFERENCES :

1. <https://docs.docker.com/engine/install/ubuntu/>
2. <https://www.youtube.com/watch?v=aMKUuaga85A&t=183s>
3. <https://hub.docker.com/>
4. <https://www.youtube.com/watch?v=iJeL2tOFfvM&t=852s>
5. <https://www.edureka.co/blog/docker-commands/>
6. https://docs.docker.com/?utm_source=docker&utm_medium=inproductad&utm_campaign=20-11nurturecli_docs