Docker Notes

Docker image : A Docker image is a file, comprised of multiple layers, used to execute code in a Docker container. An [image](https://searchitoperations.techtarget.com/definition/container-image) is essentially built from the instructions for a complete and executable version of an application, which relies on the host OS [kernel](https://searchdatacenter.techtarget.com/definition/kernel). When the Docker user runs an image, it becomes one or multiple instances of that container.

Commands for Docker Images:

* history: docker history shows the history of an image, including changes made to it and its layers.
* update: docker update allows a user to update the configuration of containers.
* tag: docker tag creates a tag, such as *target\_image*, which enables users to group and organize container images.
* search: docker search looks in [Docker Hub](https://searchitoperations.techtarget.com/definition/Docker-Hub), an image repository, for whatever the user needs.
* save: docker save allows a user to save images to an archive.
* rmi: docker rmi removes one or multiple images.

**Docker image repositories**

Docker users store images in private or public [repositories](https://searchoracle.techtarget.com/definition/repository), and from there can deploy containers, test images and share them. Docker offers [Docker Hub](https://searchitoperations.techtarget.com/definition/Docker-Hub), which is a cloud-based registry service that includes private and public image repositories. It also has Docker Trusted Registry, which adds image management and access control features.

*Official images* have been produced by Docker, while *community images* are images created by Docker users. CoScale agent is an example of an official Docker image, which provides monitoring of Dockerized applications. An example of a community Docker image is datadog/docker-dd-agent, which is as Docker container for agents in the [log management](https://searchitoperations.techtarget.com/definition/log-management)program Datadog.

A user can upload their own custom image to the Docker Hub by using the docker pushcommand. To ensure the quality of community images, Docker reviews the image and provides feedback for the image author before publishing. Once it is published, the author of the image is responsible for updates. Use prudent caution when sourcing an image from another party, as attackers can gain access to a system through copycat images designed to trick a user into thinking they are from a trusted source.

docker client

This is the utility we use when we run any docker commands e.g. docker run (docker container run) , docker images , docker ps etc. It allows us to run these commands which a human can easily understand.

docker deamon

docker registry

docker container

port Forwarding

interactive mode

detached mode

Commands

docker run<image name>

docker pull <image Name>

docker images

docker ps

docker ps -a

docker rmi <image -id/imagename>

docker rm <container-id/containr name>

docker rm $(docker ps -aq)

docker rmi $(docker images -a -q)

port forwarding

docker exec -it <continer name> /bin/bash

read escape sequence

docs.docker.com

process tree,file system, and network

Docker:

docker images : it will give you the list of images which are present in docker image store

docker search <image name> : it will give you list of all the images which are present in docker registry

docker pull <image name> : it will down load the image from docker registry to docker image stores

docker ps : it will returns the list which are running on the docker container

docker ps -a : it will returns all the images which were run previously and are run currently as well

docker image file : it is the file which contains the instructions about application as well as its dependencies

docker start <imagname or imgeid> : it will do the start operation on docker container for the perticular image

dockr stop <imagname or imgeid> :it will do the stop operation on docker container for the perticular image

docker rm <imagname or imgeid> : it will remove the aplication from docker container but not in image store.2) before remove the docker image it has been stopped 3) with out stopping we can remove the application from docker cotainer using --force command

docker rm <imagname or imgeid> --force

docker rmi <imagename or id> : it will remove the image from image store

docker inspect <imagname or imgeid>

docker log <imagname or imgeid>

detached mode

interactive mode

control groups

capabilities --> from user name space

docker pull centos

docker run -it cetos/bin/bash

docker rm $(docker ps -a -q) --force

docker rmi $(docker images -q)

yum install tree

docker ps -a

docker inspect <imagname or imgeid>