Page_ DOCKER Objectives: - What are containers! > What is docker! > Why do you need it? > Run dockez Containers. - Create a Docker Image > Networks in Docker 7 Docker Compose > Docker Concepts in Depth Docker for windows/mae Docker Swarm > Docker Vs Kubernetes.

Why do you need docker?

· Compatibility / Dependency

· Long schip time

· Different Dev/Test/Prod Environmente.

What can it do?

· Contamerize Applications

· Run each service with its own dependencies in seperate containers.

What are containers?

Confairners are completely is olated emirronments. As in they can have their own processes or services, their own network interfaces, their own marries mounts.

Docker utilizes Ofxc (Linux confainles).

Container es image

On image is a package or a template which is used to create one or more containers.
Containers are running in stances of images

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that are isolated and have their own environment and set of processes.

DOCKER COMMANDS:

- Run - Start a container

The docker run command is used to sum a container from an image.

If the image is not present on the host, he will go out to Docker Hub and pull the image down.

e g docker run nginx

> PS - list containers

The docker ps command lists all numing conformers and some basic information about them. Such as containes ID, name of the image, the current status, etc. Each container gets a sandom ID automatically and name created for it by Docker.

e.g. docker ps

docker ps - a

To see all containers running or not, use the dash a option. This outputs all running as well as previously stopped or exited containers.

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-> Stop - stop a container.

To stop a running container use the Docker stop command, but you must provide either the container ID or the container name in the Stop command.

e.g. docker stop [container ID]

> Rm - Remore a container

Use the docker command "rm" to remove a stopped or exited container permanently. If it prints the name back, we are good.

e.g. docker rm [container name]

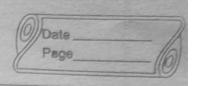
7 images - List images

Use the docker command "images" to see a list of available images and their sizes.

e.g. docker images

> rmi - Remone images

De the docker command "emi" to remove an image that you no longer plan to use lemember you must ensure that no



containers are sunning off of that image before attempting to remove the image. You must stop and delete all dependent containers to be able to delete an image.

e. g. docker emic [container name]

> Pull - download om image

Use the docker full command to only full the image and not run the container; e.g. docker pull [container name]

Note:

Unlike vistual machines, containess are not meant to host an operating system. Containess are meant to rion a specific task or process such has host an instance of a web server or application server or a database, or simply to carry some leind of computation or analysis trisk. Once the task is complete, the containes enits, a container only lives as long as the process inside it is alive.