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Curriculum

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Docker

Readme

- What is Docker and why is it popular? (/rltoken/vnwC_G0pvR6XyfP1LUQhag)

Take note: The following instructions are run in a ubuntu-xenial virtual machine setup using Vagrant. To do the same, you can also install docker in any Vagrant virtual machine, or install docker on your host OS (Windows, Linux or Mac OS)

Let's first pull a Docker image and run a container:

```
vagrant@ubuntu-xenial:~$ docker ps
CONTAINER ID      IMAGE               COMMAND             CREATED           STATUS
PORTS            NAMES
vagrant@ubuntu-xenial:~$ docker run -d -ti ubuntu:16.04
Unable to find image 'ubuntu:16.04' locally
16.04: Pulling from library/ubuntu
34667c7e4631: Pull complete
d18d76a881a4: Pull complete
119c7358fbfc: Pull complete
2aaf13f3eff0: Pull complete
Digest: sha256:58d0da8bc2f434983c6ca4713b08be00ff5586eb5cdf47bcde4b2e88fd40f88
Status: Downloaded newer image for ubuntu:16.04
e1fc0d4bbb5d3513b8f7666c91932812da7640346f6e05b7cfc3130ddbbb8278
vagrant@ubuntu-xenial:~$ docker ps
CONTAINER ID      IMAGE               COMMAND             CREATED           STATUS
PORTS            NAMES
e1fc0d4bbb5d      ubuntu:16.04        "/bin/bash"         About a minute ago Up Abo
ut a minute       keen_blackwell
vagrant@ubuntu-xenial:~$
```

Note that `docker` command will pull the Ubuntu docker container image from the Internet and run it. I let you look at the meaning of the flags using the command `docker run --help`, the main idea is that it keeps the container up and running.

To execute a command on the Docker container, use `docker exec` :



Help

```
vagrant@ubuntu-xenial:~$ docker exec -i e1fc0d4bbb5d hostname
e1fc0d4bbb5d
vagrant@ubuntu-xenial:~$ hostname
ubuntu-xenial
vagrant@ubuntu-xenial:~$
```

If you want to connect to your Docker container and use Bash, you need to use `docker exec -ti`:

```
vagrant@ubuntu-xenial:~$ docker exec -ti e1fc0d4bbb5d /bin/bash
root@e1fc0d4bbb5d:/# echo "I am in $(hostname) Docker container"
I am in e1fc0d4bbb5d Docker container
root@e1fc0d4bbb5d:/# exit
exit
vagrant@ubuntu-xenial:~$
```

If you want to stop a container, use `docker stop`:

```
vagrant@ubuntu-xenial:~$ docker ps
CONTAINER ID        IMAGE               COMMAND             CREATED             STATUS
PORTS              NAMES
e1fc0d4bbb5d       ubuntu:16.04       "/bin/bash"        5 minutes ago      Up 5 minutes
vagrant@ubuntu-xenial:~$ docker stop e1fc0d4bbb5d
e1fc0d4bbb5d
vagrant@ubuntu-xenial:~$ docker ps
CONTAINER ID        IMAGE               COMMAND             CREATED             STATUS
PORTS              NAMES
vagrant@ubuntu-xenial:~$
```

