**What is Docker ?**

* Docker is a tool designed to make it easier to create, deploy, and run applications by using containers.
* Docker is a set of Platform as a service which use OS level virtualization to deliver application in packages called container.
* All Container are run by a OS kernel and share the system resources that is the reason containers are lightweight then VM.

Graphical user interface

Description automatically generated with medium confidence

CONTAINERS

Multiple containers can run on the same machine and share the OS kernel with other containers, each running as isolated processes in user space. Containers take up less space than VMs (container images are typically tens of MBs in size), can handle more applications and require fewer VMs and Operating systems

VIRTUAL MACHINES

The hypervisor allows multiple VMs to run on a single machine. Each VM includes a full copy of an operating system, the application, necessary binaries, and libraries - taking up tens of GBs. VMs can also be slow to boot.

**Docker Installation**

* Download the docker from docker website and install it.

**How to pull Selenium Hub and Node Images:**

* docker pull selenium/hub:3.9.1
* docker pull selenium/node-chrome-debug
* docker pull selenium/node-firefox-debug

**How to run/setup Hub**

1. docker run -d -p 4545:4444 --name selenium-hub selenium/hub:3.9.1

**How to run/setup Node’s**

1. docker run -d -P --link selenium-hub:hub selenium/node-chrome-debug
2. docker run -d -P --link selenium-hub:hub selenium/node-firefox-debug

**How to login each container to see real execution**

* Install VNC Viewer from google and install it
* Enter address of an image in address field like : 0.0.0.0:32769 and hit enter



Execute test in hub:

Graphical user interface, text, application, email

Description automatically generated

**Zalenium**

What is Zalenium?

* Zalenium is an open-source project that helps set up a selenium grid infrastructure that scales up and down dynamically. It is a docker-selenium based solution to boot up the grid within seconds.
* A flexible and scalable container-based Selenium Grid with video recording, live preview, basic auth & dashboard

**Note** for ref: <https://opensource.zalando.com/zalenium/>

Before start:

# Pull docker-selenium

* docker pull elgalu/selenium

# Pull Zalenium

* docker pull dosel/zalenium

# Run it!

docker run --rm -ti --name zalenium -p 4444:4444 -v /var/run/docker.sock:/var/run/docker.sock -v /tmp/videos:/home/seluser/videos --privileged dosel/zalenium start

# Point your tests to http://localhost:4444/wd/hub and run them

# Stop

docker stop zalenium