What is Docker?

Lets download and find out ;)

1

[Download Docker] and install then skip to step 3.

[12]
```
$$async$$ = true;
var http = require('https');
var fs = require('fs');
var downloads =
http.get('https://download.docker.com/win/stable/InstallDocker.msi', (r)
=> {
     r.pipe(fs.createWriteStream('InstallDocker.msi')).on('finish', ()
=> {

 http.get('https://github.com/jpassing/elevate/releases/download/1.0/ele
vate.zip', (r) => {
              http.get(r.headers['location'], (r) => {

 r.pipe(fs.createWriteStream('elevate.zip')).on('finish', () => {
                        $$done$$('downloaded docker.msi, elevate.zip');
                    });
              });
         });
    });
});
```

2

Install Docker for Windows quietly

[13]
```
$$async$$ = true;
var exec = require('child_process').exec;
var install = exec('powershell -c "Expand-Archive -Force ' +
process.cwd() + '\\elevate.zip"', () => {
     exec(process.cwd() + '\\elevate\\bin\\x86\\Release\\elevate.exe
msiexec /i ' + process.cwd() + '\\InstallDocker.msi /qn /L*V! ' +
```

```
    process.cwd() + '\\log.txt', () => {
             $$done$$('installed Docker');
        }).stderr.on('data', (d) => console.log(d));
    }).stderr.on('data', (d) => console.log(d));
```

Create a Docker container with some dev tools:

- selenium (xvfb, x11vnc, novnc, mocha)
- source code (git, act.ecommerce, angular-cli)

Start from the selenium-chrome-debug image

[14]

```
    FROM selenium/standalone-chrome-debug

    RUN apt-get -qq update
    RUN apt-get install -y --fix-missing git curl wget zip unzip vim
    dos2unix g++ build-essential python net-tools
    RUN wget -O - https://deb.nodesource.com/setup_7.x | bash
    RUN apt-get install -y nodejs

    RUN npm install -g live-server babel-cli

    ADD act.ecommerce /home/seluser/act.ecommerce
    ADD mobile /home/seluser/mobile
    ADD novnc /home/seluser/novnc

    WORKDIR /home/seluser/act.ecommerce
    RUN npm install
    RUN npm run build

    WORKDIR /home/seluser/mobile
    RUN npm install

    WORKDIR /home/seluser/
    ADD new_entry.sh /opt/bin/entry_point.sh
    RUN chmod a+x /opt/bin/entry_point.sh
    RUN dos2unix /opt/bin/entry_point.sh
```

Create a Docker file and project directory.

[15]
```
/* Your directory structure should look like this
file -What is Docker.ipynb
dir  -selenium-act
file |--Dockerfile
file |--new_entry.sh
dir  |--act.ecommerce (from git)
dir  |--mobile        (git repo in progress)
dir  |--novnc
(https://github.com/novnc/noVNC/archive/master.zip)
*/
```

3

Build the Docker image

[16]
```
$$async$$ = true;
var exec = require('child_process').exec;
exec('docker build -t act-selenium ./selenium-act', () => {
    exec('docker images', () => $$done$$('built Docker
container')).stdout.on('data', (d) => console.log(d));
}).stdout.on('data', (d) => console.log(d));
```

4

Run your Docker container

[17]
```
$$async$$ = true;
var exec = require('child_process').exec;
exec('docker stop act-selenium', () =>
exec('docker rm act-selenium', () =>
exec('docker run --shm-size=2g --name act-selenium -d -p 8888:8888 -p
6080:6080 -p 5900:5900 -p 4444:4444 -p 4200:4200 act-selenium', () =>
exec('docker ps', () =>
$$done$$('launched Docker container')
).stdout.on('data', (d) => console.log(d))
).stderr.on('data', (d) => console.log(d))
).stdout.on('data', (d) => console.log(d))
).stdout.on('data', (d) => console.log(d));
```

5

Connect to VNC so we can see the test play out

Click here to open in a separate browser

[20]
```
// wait a few seconds for the container services to start
$$async$$ = true;
setTimeout(() => {
$$.html(
     '<div style="display:block; width:100%; padding-
bottom:75%;position:relative;">' +
     '<iframe id="vnc"' +

  'style="position:absolute;top:0;right:0;bottom:0;left:0;width:100%;heig
ht:100%;border:0;"' +
          'src="http://localhost:6080/vnc.html?
password=secret&host=localhost&port=6080&autoconnect=true&resize=downsca
le&view_only=true"></iframe></div>');
}, 3000);
```

6

Run our first test by executing through docker

[19]
```
$$.async = true;
var exec = require('child_process').exec;
var runTest = exec('docker exec -t act-selenium npm --prefix
/home/seluser/mobile run test', () =>
                     $$done$$('test executed')
                    ).stdout.on('data', (d) => console.log(d));
```