

UNIVERSIDAD DE GUADALAJARA
CENTRO UNIVERSITARIO DE CIENCIAS EXACTAS E INGENIERIAS

Materia: Computación tolerante a fallas

Clave: I7036

Sección: D06



NRC: 179961

Docker

Código estudiante: 221350567

Alumno: Rauf Alfonso Hamden Estrada

Carrera: Ingeniería en Computación

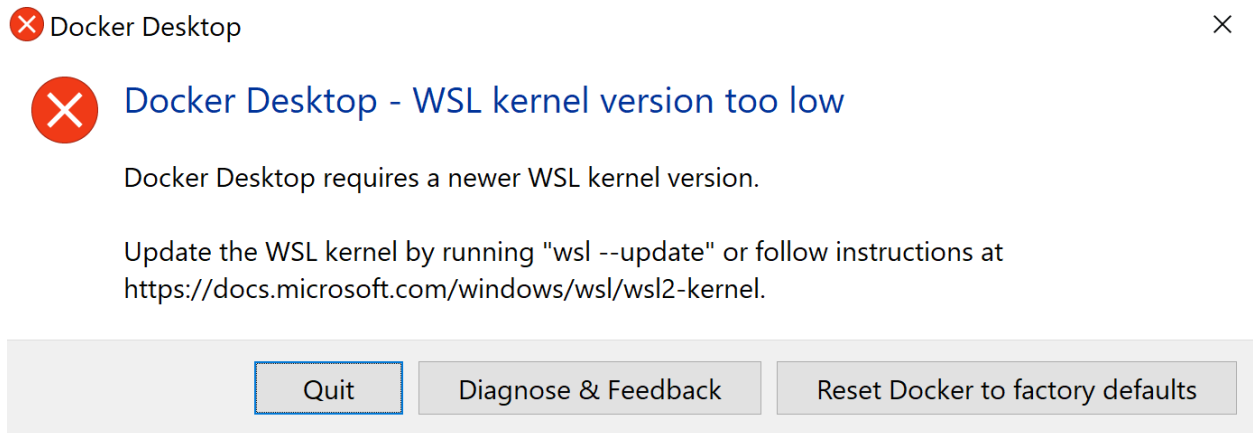
Fecha: 30/10/2023

Docente: Michel Emanuel Lopez Franco

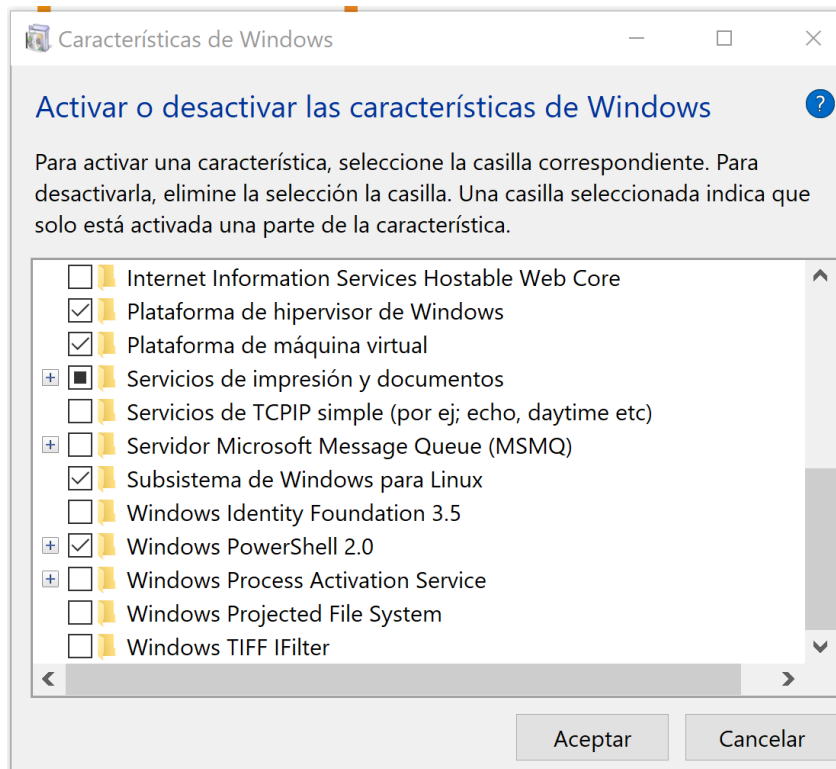
2023B

Instalación y utilización de Docker

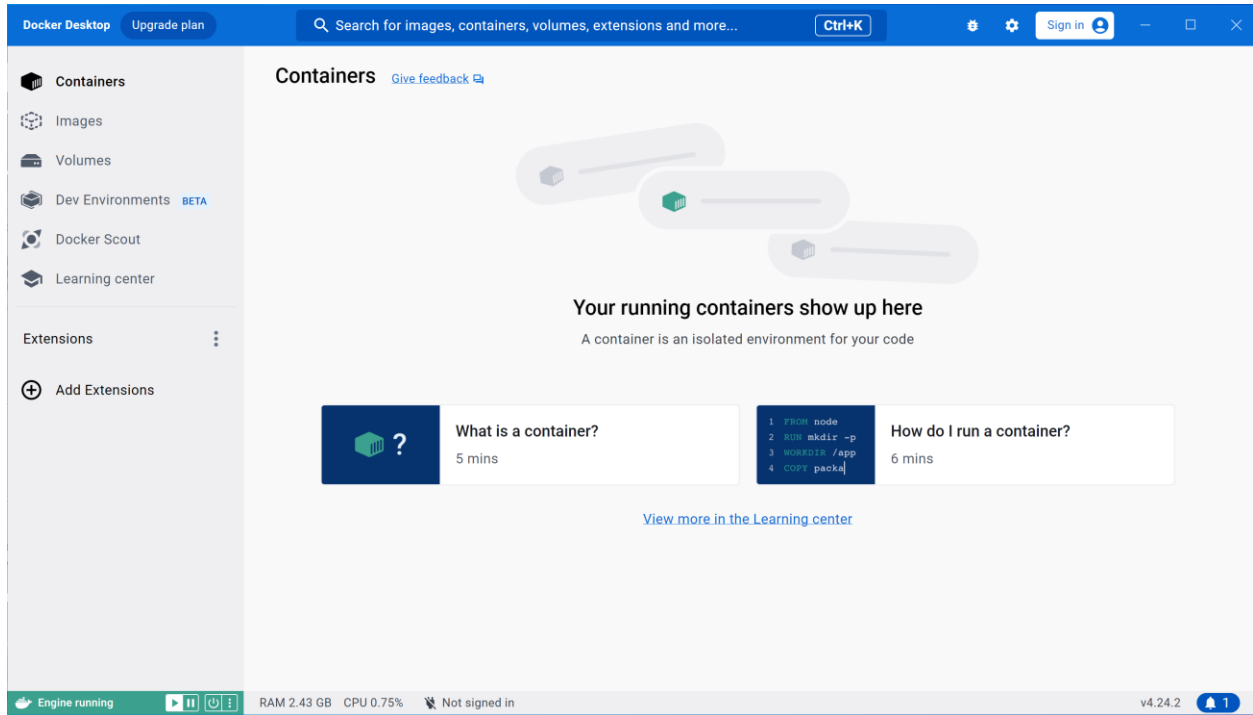
1. Primero presentamos problemas al descargar el docker de Desktop



2. Para solucionarlo tuvimos que activar las siguientes características de Windows



3. Una vez solucionado el problema entramos a Docker



4. Descargamos la imagen principal del “ hola mundo “ para saber que funciona bien

```
C:\Users\raufa>docker run hello-world
Unable to find image 'hello-world:latest' locally
latest: Pulling from library/hello-world
719385e32844: Pull complete
Digest: sha256:88ec0acaa3ec199d3b7eaf73588f4518c25f9d34f58ce9a0df68429c5af48e8d
Status: Downloaded newer image for hello-world:latest

Hello from Docker!
This message shows that your installation appears to be working correctly.

To generate this message, Docker took the following steps:
1. The Docker client contacted the Docker daemon.
2. The Docker daemon pulled the "hello-world" image from the Docker Hub.
   (amd64)
3. The Docker daemon created a new container from that image which runs the
   executable that produces the output you are currently reading.
4. The Docker daemon streamed that output to the Docker client, which sent it
   to your terminal.

To try something more ambitious, you can run an Ubuntu container with:
$ docker run -it ubuntu bash

Share images, automate workflows, and more with a free Docker ID:
https://hub.docker.com/

For more examples and ideas, visit:
https://docs.docker.com/get-started/
```

5.Revisamos las imágenes que tenemos

```
C:\Users\raufa>docker image ls
REPOSITORY          TAG                 IMAGE ID            CREATED             SIZE
hello-world         latest             9c7a54a9a43c       5 months ago       13.3kB
```

6.Instalamos otra imagen de google

```
C:\Windows\system32\cmd.exe - docker run -it alpine:3.18.4 sh
(3/7) Installing libunistring (1.1-r1)
(4/7) Installing libidn2 (2.3.4-r1)
(5/7) Installing nghttp2-libs (1.57.0-r0)
(6/7) Installing libcurl (8.4.0-r0)
(7/7) Installing curl (8.4.0-r0)
Executing busybox-1.36.1-r4.trigger
Executing ca-certificates-20230506-r0.trigger
OK: 12 MiB in 22 packages
/ # curl www.google.com
<!doctype html><html itemscope="" itemtype="http://schema.org/WebPage" lang="es-419"><head><meta content="text/html; cha
rset=UTF-8" http-equiv="Content-Type"><meta content="/images/branding/googleg/1x/googleg_standard_color_128dp.png" itemp
rop="image"><title>Google</title><script nonce="4m_D-mbdDgX0IEkmZECShA">(function(){var _g={kEI:'TgA2ZfHsCK3v0PEPueqU2A8
',kEXPI:'0,1365467,207,2414,2390,2316,383,246,5,1129120,1805,1195914,682,380090,16114,28684,22430,1362,283,12035,4747,12
834,4998,17075,38444,2872,2891,3926,4422,3406,606,30668,27619,2402,2615,13721,20583,4,59617,4437,22607,6630,7596,1,11943
,30211,2,16395,23366,5679,1020,31123,4568,6255,23421,1252,33064,2,2,1,24626,2006,8155,23351,873,7829,11804,7,1922,9779,4
2459,20199,5796,3,14337,14,82,12151,8055,8377,19240,298,4825,782,2248,15816,1804,14360,6,8471,17918,6327,1634,26700,7768
,146,9629,705,5220840,711,2,196,383,133,5994253,96,2806429,141,795,29236,3,36,36,9,1,53,164,2,42,6,17,5,10,7,9,23940931,
579,4060200,43887,3,2105,3,1165,4,298,170,799,25150776,3326,1837,2,2785,1,4848,2945,5463,2879,1595,111,10114,1966,6,4241
,4220,2662,3279,3042,877,3,3245,3335,3117,1973,429,1597,1879,1523,1712,303,2457,4597,2491,420,2732,1223,15,3,3082,291,25
38,1717,1,608,2657,1764,1056,3074,733,172,393,1504,2746,3,390,2,665,631,2052,27,6,5,15,312,643,7,1,8,1454,505,412,1755,1
0,689,4,872,972,894,10,776,94,117,6,1329,1116,25,352,40,1202,1115,238,1,523,746,213,576,412,453,207,143,1300,936,2,47,11
30,707,869,29,3,109,835,115,127,1001,128,3,1020,1045,395,37,169,58,142,3,2,2,2,197,148,5,1114,56,119,576,4,491,39,69,808
,420,366,246,1370,54,521,631,153,47,28,923,4,445,946,3,129,75,215,6,127,91,163,120,85,263,4,520,530,110,1536,476,147,81,
29,60,118,158,606,917,592,2,376,716,481,3',kBL:'1m8P',kOPI:89978449});(function(){var a;(null==(a=window.google)?0:a.stvs
c)?google.kEI=_g.kEI:window.google=_g;}).call(this);})();(function(){google.sn='webhp';google.kHL='es-419';})();(functio
n(){
var h=this||self;function l(){return void 0!==window.google&&void 0!==window.google.kOPI&&0!==window.google.kOPI?window.
google.kOPI:null};var m,n=[];function p(a){for(var b;a&&(!a.getAttribute)||!(b=a.getAttribute("eid")));a=a.parentNode;re
turn b||m}function q(a){for(var b=null;a&&(!a.getAttribute)||!(b=a.getAttribute("leid")));a=a.parentNode;return b}functi
on r(a){/^http:\/\/i.test(a)&&"https:"===window.location.protocol&&(google.ml&&google.ml(Error("a"),l,{src:a,elmm:l}),a=""
```

7.Revisamos la imagen que acabamos de instalar

```
C:\Windows\system32\cmd.exe
Microsoft Windows [Versión 10.0.19045.3208]
(c) Microsoft Corporation. Todos los derechos reservados.

C:\Users\raufa>docker ps
CONTAINER ID   IMAGE      COMMAND                  CREATED        STATUS        PORTS          NAMES
ea75b1334e09   nginx:1.23 "/docker-entrypoint..." 32 seconds ago Up 29 seconds 80/tcp         focused_lamport

C:\Users\raufa>
```

8.Corremos nuestro contenedor

```
C:\Users\raufa>docker logs 5be0fd216b34918318b10e74f695085dcae18a5a71d2f540a004c103bb069e87
/docker-entrypoint.sh: /docker-entrypoint.d/ is not empty, will attempt to perform configuration
/docker-entrypoint.sh: Looking for shell scripts in /docker-entrypoint.d/
/docker-entrypoint.sh: Launching /docker-entrypoint.d/10-listen-on-ipv6-by-default.sh
10-listen-on-ipv6-by-default.sh: info: Getting the checksum of /etc/nginx/conf.d/default.conf
10-listen-on-ipv6-by-default.sh: info: Enabled listen on IPv6 in /etc/nginx/conf.d/default.conf
/docker-entrypoint.sh: Launching /docker-entrypoint.d/20-envsubst-on-templates.sh
/docker-entrypoint.sh: Launching /docker-entrypoint.d/30-tune-worker-processes.sh
/docker-entrypoint.sh: Configuration complete; ready for start up
2023/10/23 05:13:16 [notice] 1#1: using the "epoll" event method
2023/10/23 05:13:16 [notice] 1#1: nginx/1.23.4
2023/10/23 05:13:16 [notice] 1#1: built by gcc 10.2.1 20210110 (Debian 10.2.1-6)
2023/10/23 05:13:16 [notice] 1#1: OS: Linux 5.10.16.3-microsoft-standard-WSL2
2023/10/23 05:13:16 [notice] 1#1: getrlimit(RLIMIT_NOFILE): 1048576:1048576
2023/10/23 05:13:16 [notice] 1#1: start worker processes
2023/10/23 05:13:16 [notice] 1#1: start worker process 29
2023/10/23 05:13:16 [notice] 1#1: start worker process 30
2023/10/23 05:13:16 [notice] 1#1: start worker process 31
2023/10/23 05:13:16 [notice] 1#1: start worker process 32

C:\Users\raufa>
```

```
C:\Windows\system32\cmd.exe
Microsoft Windows [Versión 10.0.19045.3208]
(c) Microsoft Corporation. Todos los derechos reservados.

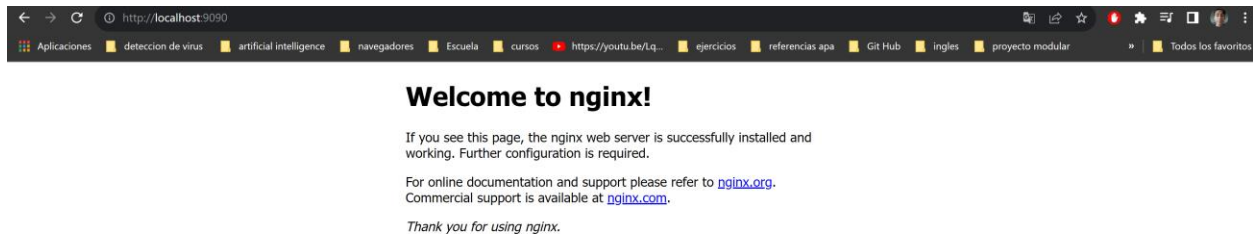
C:\Users\raufa>docker ps
CONTAINER ID   IMAGE     COMMAND                  CREATED        STATUS        PORTS        NAMES
ea75b1334e09   nginx:1.23 "/docker-entrypoint...." 32 seconds ago Up 29 seconds 80/tcp        focused_lamport

C:\Users\raufa>docker run -d nginx:1.23
5be0fd216b34918318b10e74f695085dcae18a5a71d2f540a004c103bb069e87

C:\Users\raufa>docker logs {id}
Error response from daemon: No such container: {id}

C:\Users\raufa>docker logs {5be0fd216b34918318b10e74f695085dcae18a5a71d2f540a004c103bb069e87}
Error response from daemon: No such container: {5be0fd216b34918318b10e74f695085dcae18a5a71d2f540a004c103bb069e87}
```

9. Nos metemos al localhost al puerto 9090 y nos aparece el siguiente mensaje



10. Abrimos el Puerto

```
PS C:\Users\raufa\OneDrive\Escritorio\Programas Python\docker> node src/server.js
>>
App listening on port 3000
```

```
Windows PowerShell
-a---- 14/08/2023 09:57 p. m.      2243 pruebaJulioEstepan.py
-a---- 25/08/2023 11:47 a. m.      1837 python con interfaz despegable.py
-a---- 31/08/2023 12:21 a. m.      1978 python intefacer correcta.py
-a---l 11/02/2023 12:22 a. m.      4923 recursividad.py
-a---- 26/08/2023 01:32 a. m.      45133 resultado1.txt
-a---- 30/08/2023 05:17 p. m.      56815 resultado2.txt
-a---- 07/09/2023 07:03 p. m.      3931 robin.py
-a---- 05/09/2023 09:10 a. m.      519 tkinder hola mundo en interfaz.py
-a---- 28/08/2023 05:20 p. m.      206 validaciones en python.py
-a---- 17/08/2023 02:01 p. m.      133 whatssap.py

PS C:\Users\raufa\OneDrive\Escritorio\Programas Python> cd docker
PS C:\Users\raufa\OneDrive\Escritorio\Programas Python\docker> ls

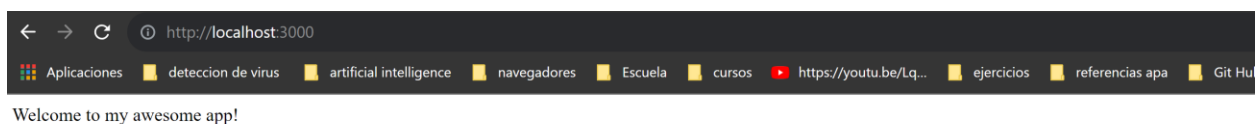
Directorio: C:\Users\raufa\OneDrive\Escritorio\Programas Python\docker

Mode                LastWriteTime         Length Name
----                -
d----- 22/10/2023 11:53 p. m.             src
-a---- 22/10/2023 11:24 p. m.          109 package.json

PS C:\Users\raufa\OneDrive\Escritorio\Programas Python\docker> none src/server.js
none : El término 'none' no se reconoce como nombre de un cmdlet, función, archivo de script o programa ejecutable.
Compruebe si escribió correctamente el nombre o, si incluyó una ruta de acceso, compruebe que dicha ruta es correcta e
inténtelo de nuevo.
En línea: 1 Carácter: 1
+ none src/server.js
+ ~~~~~
+ CategoryInfo          : ObjectNotFound: (none:String) [], CommandNotFoundException
+ FullyQualifiedErrorId : CommandNotFoundException

PS C:\Users\raufa\OneDrive\Escritorio\Programas Python\docker> node src/server.js
>>
App listening on port 3000
```

11.Nos metemos al puerto 3000 después de correr nuestro programa y nos aparece esto



```
C:\Users\raufa>docker image ls
```

REPOSITORY	TAG	IMAGE ID	CREATED	SIZE
node-app	1.0	9af069eba79e	About a minute ago	119MB
nginx	latest	bc649bab30d1	11 days ago	187MB
alpine	3.18.4	8ca4688f4f35	3 weeks ago	7.34MB
nginx	1.23	a7be6198544f	5 months ago	142MB
hello-world	latest	9c7a54a9a43c	5 months ago	13.3kB

```
C:\Users\raufa>
```