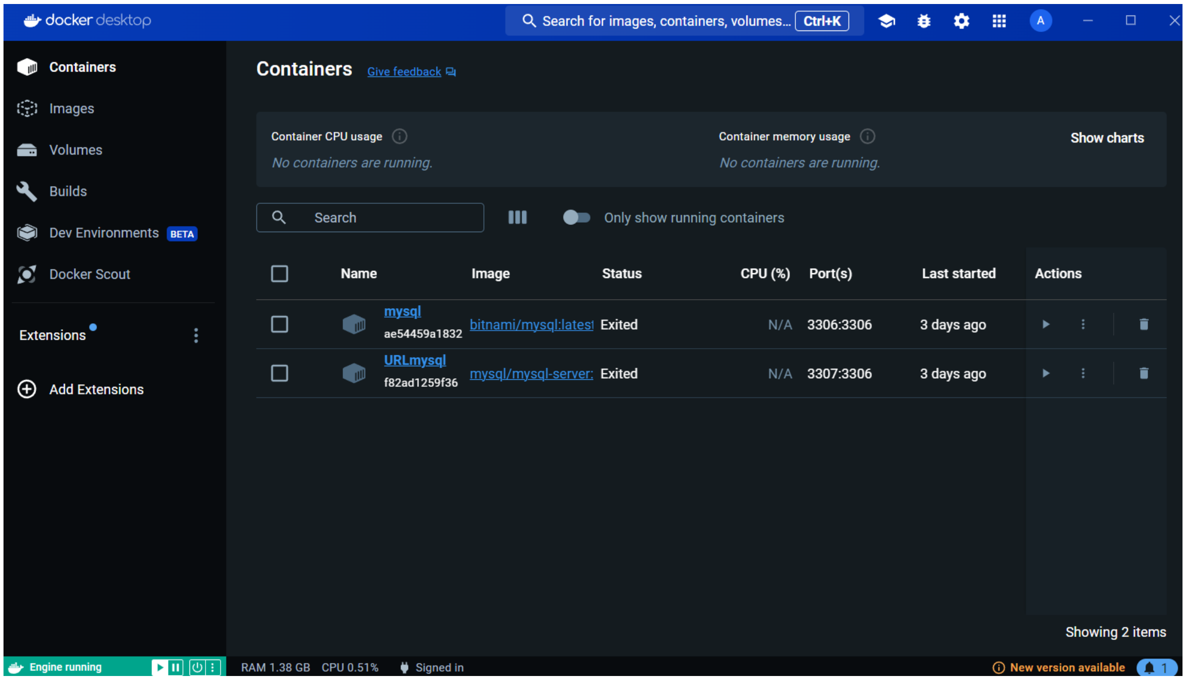
Docker Prelanzamiento de terraform



Containers

Container CPU usage
No containers are running.

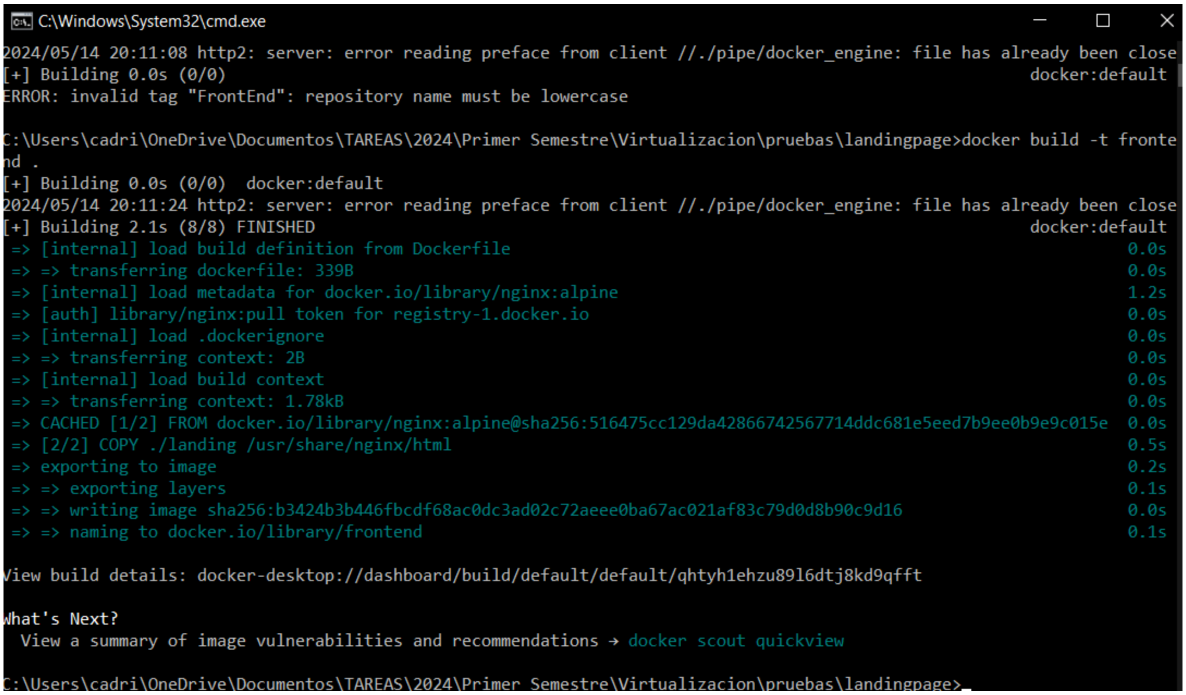
Container memory usage
No containers are running.

☐	Name	Image	Status	CPU (%)	Port(s)	Last started	Actions
☐	mysql ae54459a1832	bitnami/mysql:latest	Exited	N/A	3306:3306	3 days ago	▶ ⋮ 🗑
☐	URLmysql f82ad1259f36	mysql/mysql-server:	Exited	N/A	3307:3306	3 days ago	▶ ⋮ 🗑

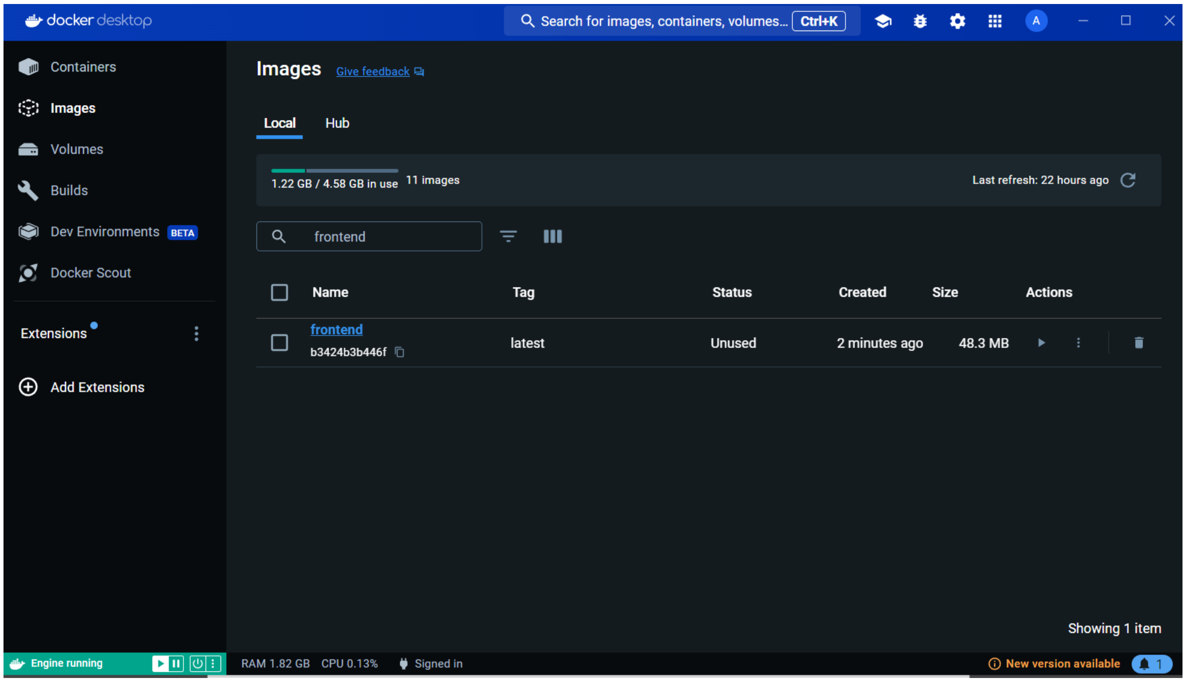
Showing 2 items

docker build -t nombre . -> Comando Utilizado para lanzar las imágenes del Fornt y BackEnd

Creación de la imagen para FRONTEND



```
2024/05/14 20:11:08 http2: server: error reading preface from client //./pipe/docker_engine: file has already been close
[+] Building 0.0s (0/0)                                                                                    docker:default
ERROR: invalid tag "FrontEnd": repository name must be lowercase

C:\Users\cadri\OneDrive\Documentos\TAREAS\2024\Primer Semestre\Virtualizacion\pruebas\landingpage>docker build -t fronte
nd .
[+] Building 0.0s (0/0)  docker:default
2024/05/14 20:11:24 http2: server: error reading preface from client //./pipe/docker_engine: file has already been close
[+] Building 2.1s (8/8) FINISHED                                                                           docker:default
 => [internal] load build definition from Dockerfile                                                                 0.0s
 => => transferring dockerfile: 339B                                                                                 0.0s
 => [internal] load metadata for docker.io/library/nginx:alpine                                                      1.2s
 => [auth] library/nginx:pull token for registry-1.docker.io                                                         0.0s
 => [internal] load .dockerignore                                                                                    0.0s
 => => transferring context: 2B                                                                                      0.0s
 => [internal] load build context                                                                                    0.0s
 => => transferring context: 1.78kB                                                                                  0.0s
 => CACHED [1/2] FROM docker.io/library/nginx:alpine@sha256:516475cc129da42866742567714ddc681e5eed7b9ee0b9e9c015e  0.0s
 => [2/2] COPY ./landing /usr/share/nginx/html                                                                       0.5s
 => exporting to image                                                                                               0.2s
 => => exporting layers                                                                                              0.1s
 => => writing image sha256:b3424b3b446fbcdf68ac0dc3ad02c72aeee0ba67ac021af83c79d0d8b90c9d16                        0.0s
 => => naming to docker.io/library/frontend                                                                          0.1s

View build details: docker-desktop://dashboard/build/default/default/qhtyh1ehzu89l6dtj8kd9qfft

What's Next?
  View a summary of image vulnerabilities and recommendations → docker scout quickview

C:\Users\cadri\OneDrive\Documentos\TAREAS\2024\Primer Semestre\Virtualizacion\pruebas\landingpage>_
```

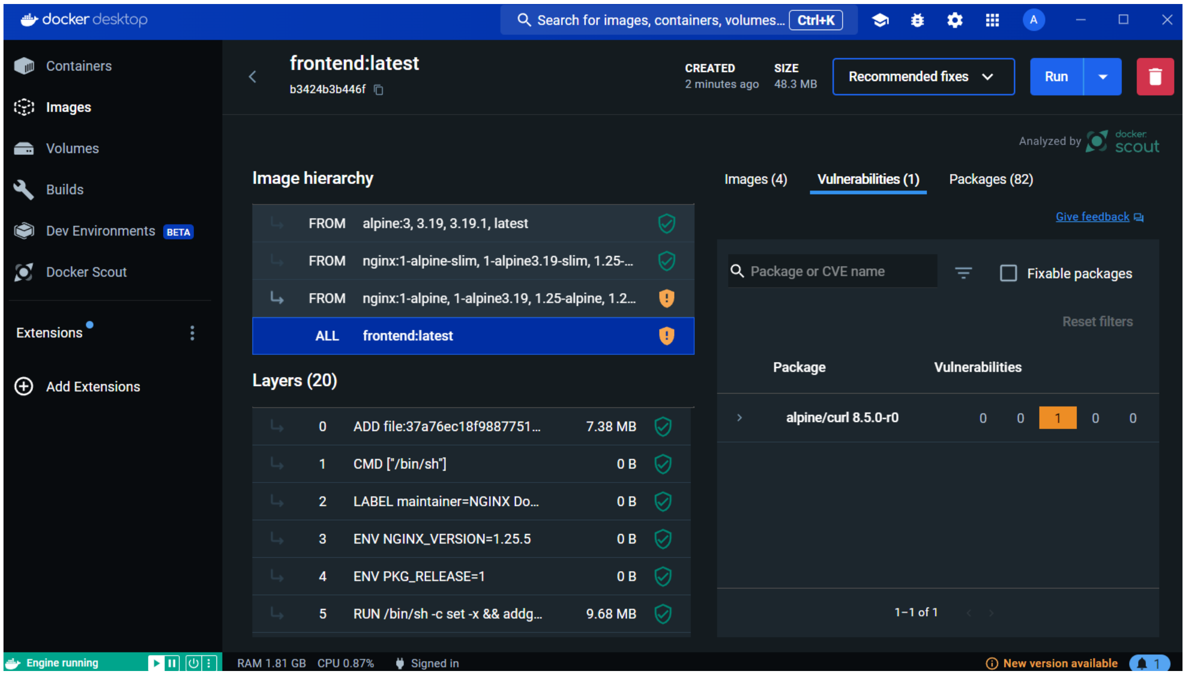


1.22 GB / 4.58 GB in use 11 images

frontend

Name	Tag	Status	Created	Size	Actions
frontend b3424b3b446f	latest	Unused	2 minutes ago	48.3 MB	

Showing 1 item



frontend:latest
b3424b3b446f

CREATED 2 minutes ago SIZE 48.3 MB

Image hierarchy

FROM	alpine:3, 3.19, 3.19.1, latest
FROM	nginx:1-alpine-slim, 1-alpine3.19-slim, 1.25-...
FROM	nginx:1-alpine, 1-alpine3.19, 1.25-alpine, 1.2...
ALL	frontend:latest

Layers (20)

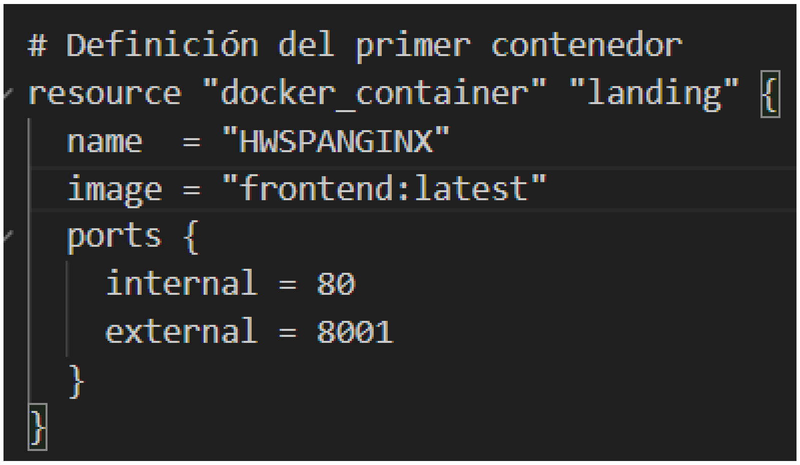
0	ADD file:37a76ec18f9887751...	7.38 MB
1	CMD ["/bin/sh"]	0 B
2	LABEL maintainer=NGINX Do...	0 B
3	ENV NGINX_VERSION=1.25.5	0 B
4	ENV PKG_RELEASE=1	0 B
5	RUN /bin/sh -c set -x && addg...	9.68 MB

Images (4) Vulnerabilities (1) Packages (82)

Package	Vulnerabilities				
alpine/curl 8.5.0-r0	0	0	1	0	0

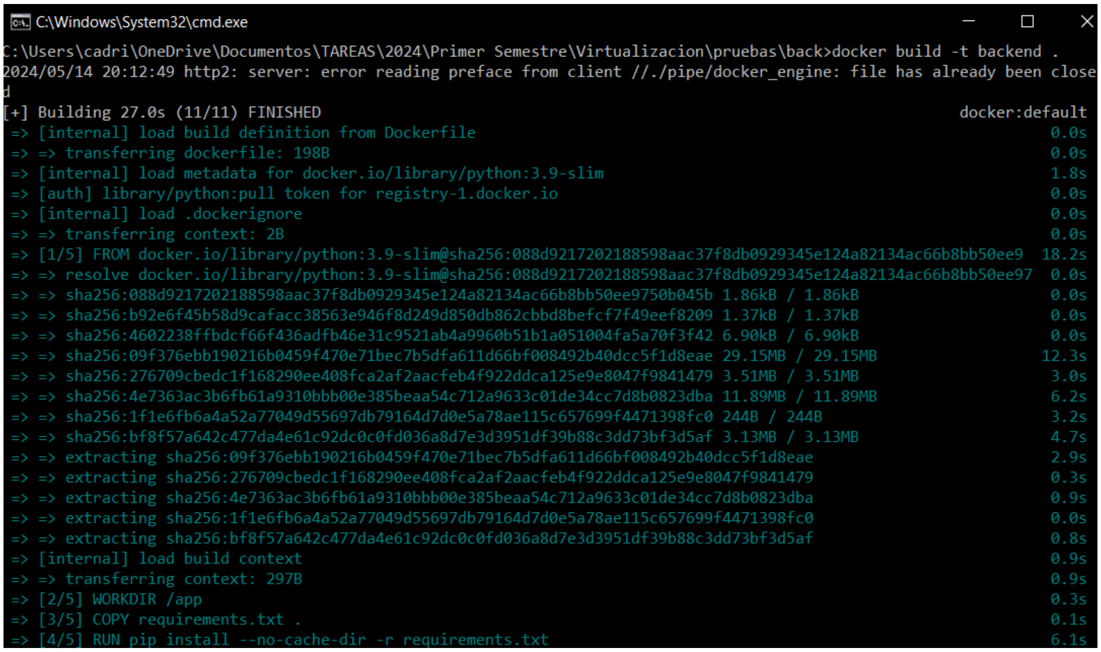
1–1 of 1

Para tener vista del FRONTEND se utilizo el puerto 8001 en localhost, esto se especifico en el archivo main.tf adjunto

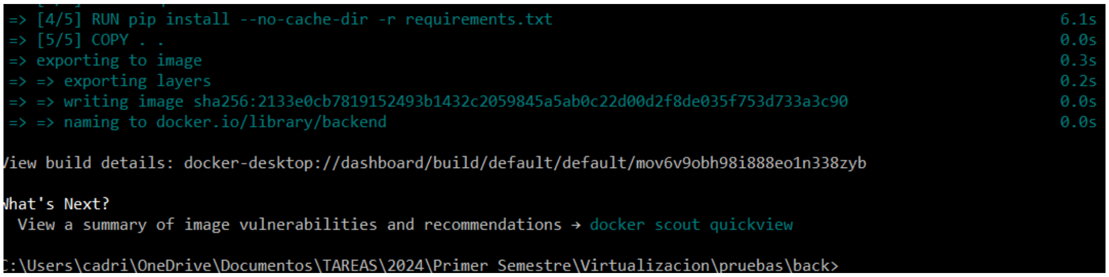


```
# Definición del primer contenedor
resource "docker_container" "landing" {
  name  = "HWSPANGINX"
  image = "frontend:latest"
  ports {
    internal = 80
    external = 8001
  }
}
```

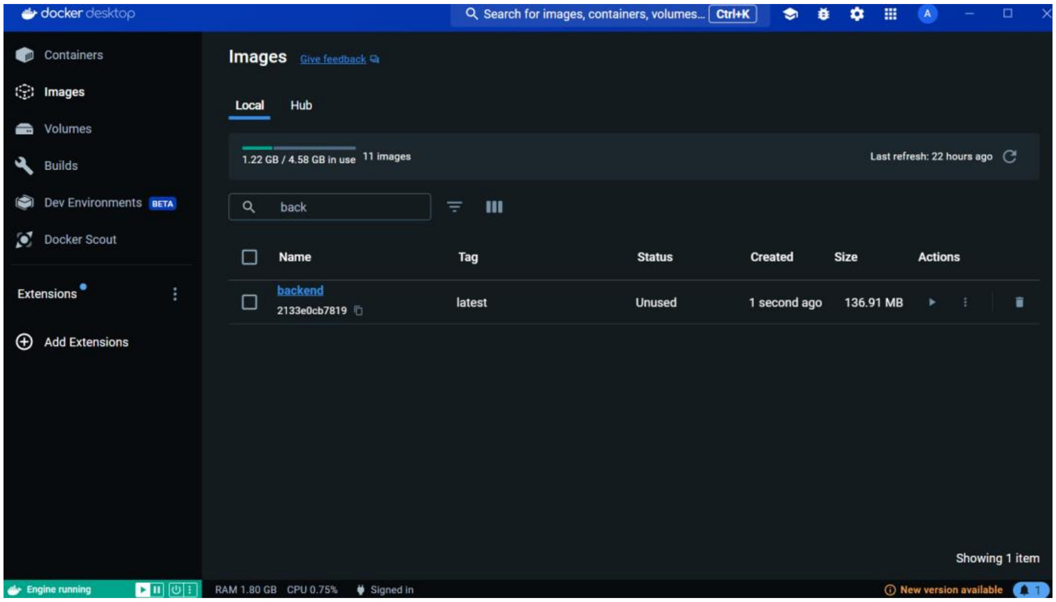
Creación de la imagen para BACKEND



```
:\Users\cadri\OneDrive\Documentos\TAREAS\2024\Primer Semestre\Virtualizacion\pruebas\back>docker build -t backend .
2024/05/14 20:12:49 http2: server: error reading preface from client //./pipe/docker_engine: file has already been close
d
[+] Building 27.0s (11/11) FINISHED                                                                         docker:default
 => [internal] load build definition from Dockerfile                                                                  0.0s
 => => transferring dockerfile: 198B                                                                                  0.0s
 => [internal] load metadata for docker.io/library/python:3.9-slim                                                    1.8s
 => [auth] library/python:pull token for registry-1.docker.io                                                         0.0s
 => [internal] load .dockerignore                                                                                     0.0s
 => => transferring context: 2B                                                                                       0.0s
 => [1/5] FROM docker.io/library/python:3.9-slim@sha256:088d9217202188598aac37f8db0929345e124a82134ac66b8bb50ee9  18.2s
 => => resolve docker.io/library/python:3.9-slim@sha256:088d9217202188598aac37f8db0929345e124a82134ac66b8bb50ee97  0.0s
 => => sha256:088d9217202188598aac37f8db0929345e124a82134ac66b8bb50ee9750b045b 1.86kB / 1.86kB                        0.0s
 => => sha256:b92e6f45b58d9cafacc38563e946f8d249d850db862cbbd8befcf7f49eef8209 1.37kB / 1.37kB                        0.0s
 => => sha256:4602238ffbdcf66f436adfb46e31c9521ab4a9960b51b1a051004fa5a70f3f42 6.90kB / 6.90kB                        0.0s
 => => sha256:09f376ebb190216b0459f470e71bec7b5dfa611d66bf008492b40dcc5f1d8eae 29.15MB / 29.15MB                     12.3s
 => => sha256:276709cbedc1f168290ee408fca2af2aacfeb4f922ddca125e9e8047f9841479 3.51MB / 3.51MB                        3.0s
 => => sha256:4e7363ac3b6fb61a9310bbb00e385beaa54c712a9633c01de34cc7d8b0823dba 11.89MB / 11.89MB                      6.2s
 => => sha256:1f1e6fb6a4a52a77049d55697db79164d7d0e5a78ae115c657699f4471398fc0 244B / 244B                            3.2s
 => => sha256:bf8f57a642c477da4e61c92dc0c0fd036a8d7e3d3951df39b88c3dd73bf3d5af 3.13MB / 3.13MB                        4.7s
 => => extracting sha256:09f376ebb190216b0459f470e71bec7b5dfa611d66bf008492b40dcc5f1d8eae                             2.9s
 => => extracting sha256:276709cbedc1f168290ee408fca2af2aacfeb4f922ddca125e9e8047f9841479                             0.3s
 => => extracting sha256:4e7363ac3b6fb61a9310bbb00e385beaa54c712a9633c01de34cc7d8b0823dba                             0.9s
 => => extracting sha256:1f1e6fb6a4a52a77049d55697db79164d7d0e5a78ae115c657699f4471398fc0                             0.0s
 => => extracting sha256:bf8f57a642c477da4e61c92dc0c0fd036a8d7e3d3951df39b88c3dd73bf3d5af                             0.8s
 => [internal] load build context                                                                                     0.9s
 => => transferring context: 297B                                                                                     0.9s
 => [2/5] WORKDIR /app                                                                                                0.3s
 => [3/5] COPY requirements.txt .                                                                                     0.1s
 => [4/5] RUN pip install --no-cache-dir -r requirements.txt                                                          6.1s
```



```
=> [4/5] RUN pip install --no-cache-dir -r requirements.txt                                                           6.1s
=> [5/5] COPY . .                                                                                                     0.0s
=> exporting to image                                                                                                 0.3s
=> => exporting layers                                                                                                0.2s
=> => writing image sha256:2133e0cb7819152493b1432c2059845a5ab0c22d00d2f8de035f753d733a3c90                           0.0s
=> => naming to docker.io/library/backend                                                                             0.0s

/iew build details: docker-desktop://dashboard/build/default/default/mov6v9obh98i888eo1n338zyb

Nhat's Next?
  View a summary of image vulnerabilities and recommendations → docker scout quickview

:\Users\cadri\OneDrive\Documentos\TAREAS\2024\Primer Semestre\Virtualizacion\pruebas\back>
```



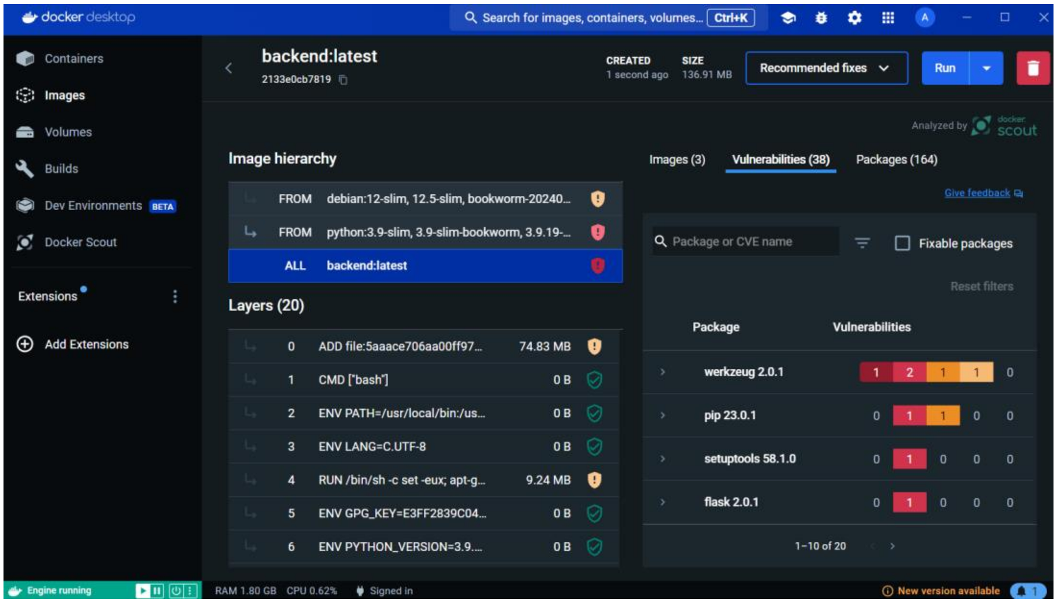
1.22 GB / 4.58 GB in use 11 images

Last refresh: 22 hours ago

□	Name	Tag	Status	Created	Size	Actions
□	backend 2133e0cb7819	latest	Unused	1 second ago	136.91 MB	

Showing 1 item

RAM 1.80 GB CPU 0.75% Signed in



backend:latest
2133e0cb7819

CREATED 1 second ago SIZE 136.91 MB

Image hierarchy

FROM	debian:12-slim, 12.5-slim, bookworm-20240...
FROM	python:3.9-slim, 3.9-slim-bookworm, 3.9.19-...
ALL	backend:latest

Layers (20)

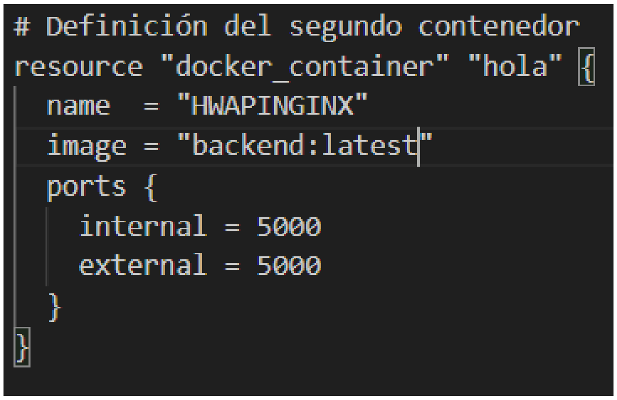
0	ADD file:5aaace706aa00ff97...	74.83 MB
1	CMD ["bash"]	0 B
2	ENV PATH=/usr/local/bin:/us...	0 B
3	ENV LANG=C.UTF-8	0 B
4	RUN /bin/sh -c set -eux; apt-g...	9.24 MB
5	ENV GPG_KEY=E3FF2839C04...	0 B
6	ENV PYTHON_VERSION=3.9....	0 B

Package	Vulnerabilities				
werkzeug 2.0.1	1	2	1	1	0
pip 23.0.1	0	1	1	0	0
setuptools 58.1.0	0	1	0	0	0
flask 2.0.1	0	1	0	0	0

1–10 of 20

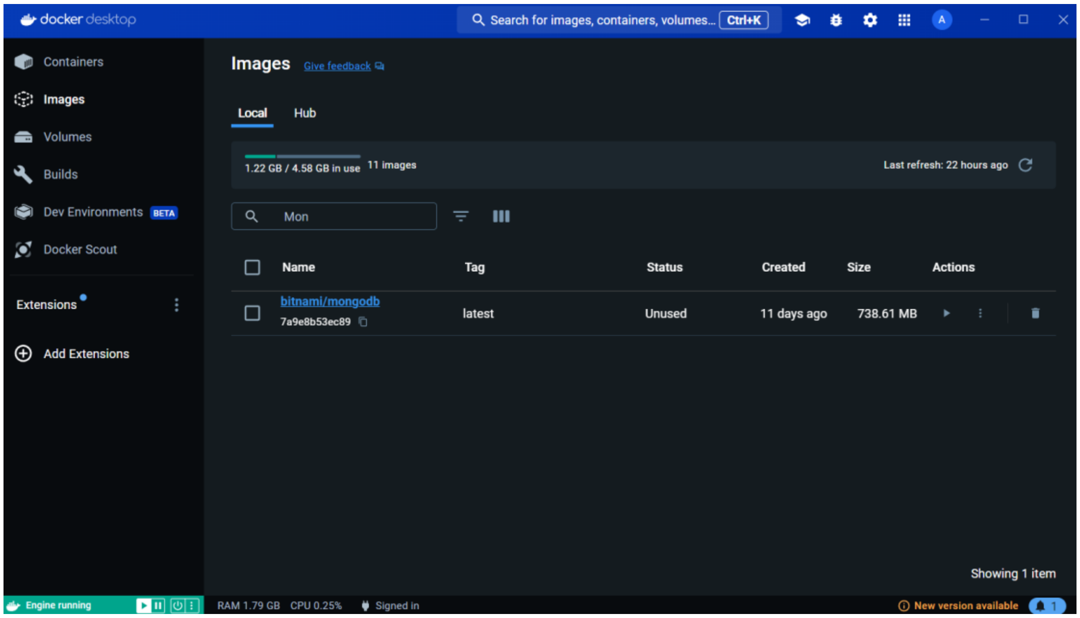
RAM 1.80 GB CPU 0.62% Signed in

Para tener vista del BACKEND se utilizó el puerto 5000 en localhost, esto se especificó en el archivo main.tf adjunto



```
# Definición del segundo contenedor
resource "docker_container" "hola" {
  name  = "HWAPINGINX"
  image = "backend:latest"
  ports {
    internal = 5000
    external = 5000
  }
}
```

Imagen de base de datos no relacional Utilizada (MongoDB)



1.22 GB / 4.58 GB in use 11 images

Last refresh: 22 hours ago

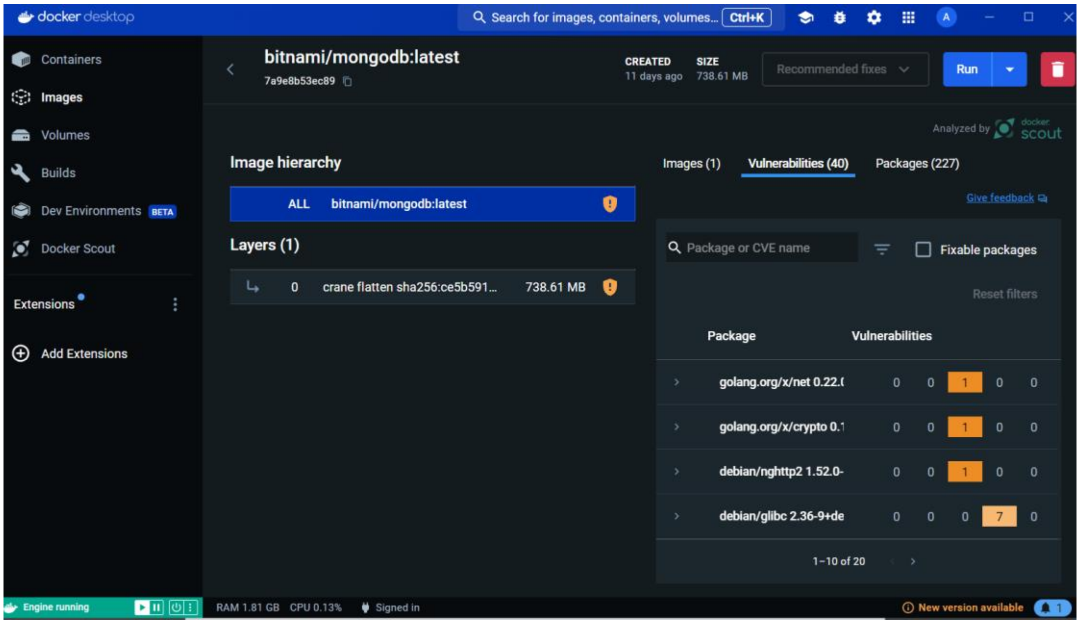
Mon

Name	Tag	Status	Created	Size	Actions
bitnami/mongodb 7a9e8b53ec89	latest	Unused	11 days ago	738.61 MB	

Showing 1 item

RAM 1.79 GB CPU 0.25% Signed in

New version available



bitnami/mongodb:latest
7a9e8b53ec89

CREATED 11 days ago SIZE 738.61 MB

Image hierarchy

ALL bitnami/mongodb:latest

Layers (1)

0 crane flatten sha256:ce5b591... 738.61 MB

Images (1) Vulnerabilities (40) Packages (227)

Package or CVE name

□ Fixable packages

Reset filters

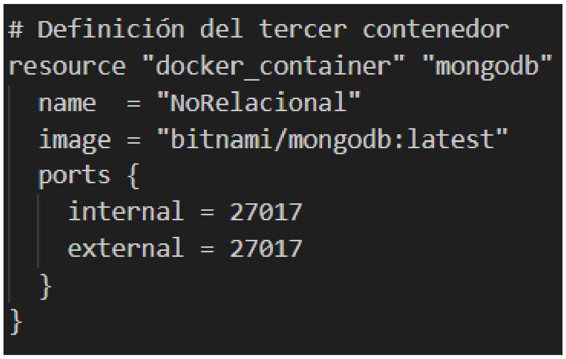
Package	Vulnerabilities				
golang.org/x/net 0.22.(	0	0	1	0	0
golang.org/x/crypto 0.1	0	0	1	0	0
debian/nghttp2 1.52.0-	0	0	1	0	0
debian/glibc 2.36-9+de	0	0	0	7	0

1–10 of 20

RAM 1.81 GB CPU 0.13% Signed in

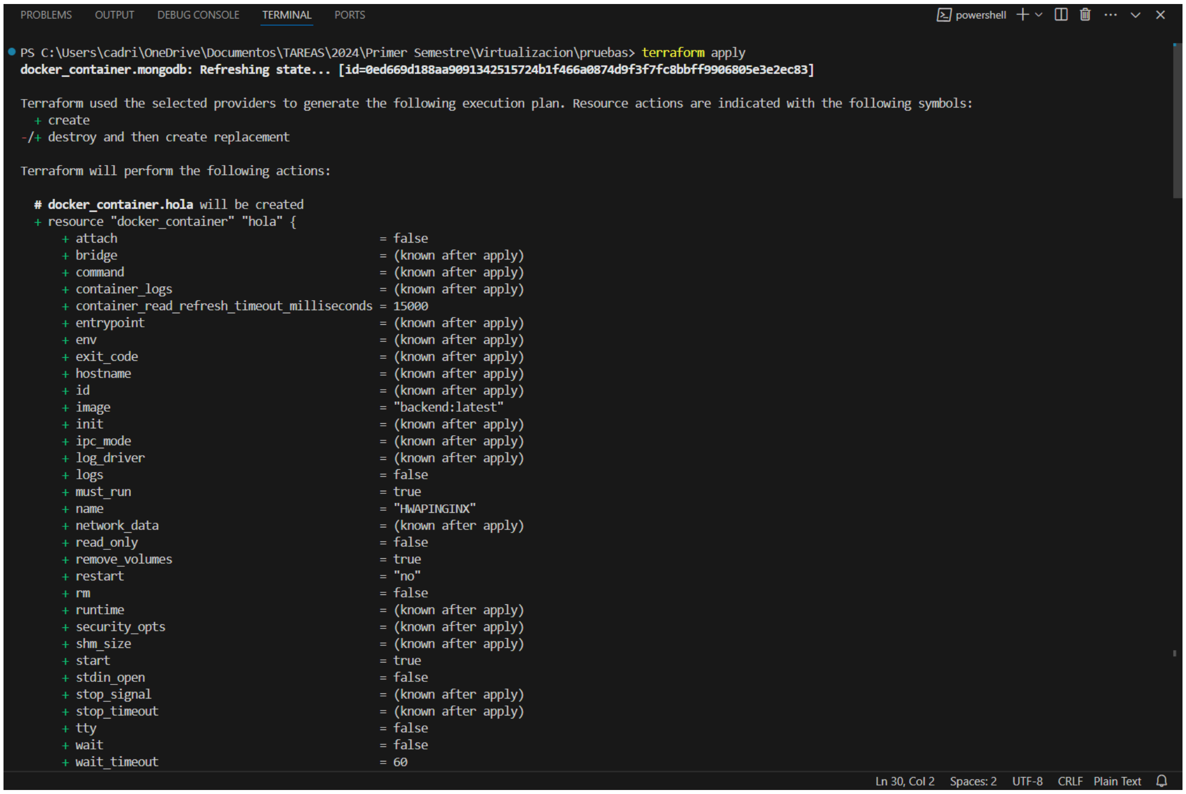
New version available

Para el lanzamiento de MongoDB se utilizó el puerto 27017 en localhost, esto se especificó en el archivo main.tf adjunto

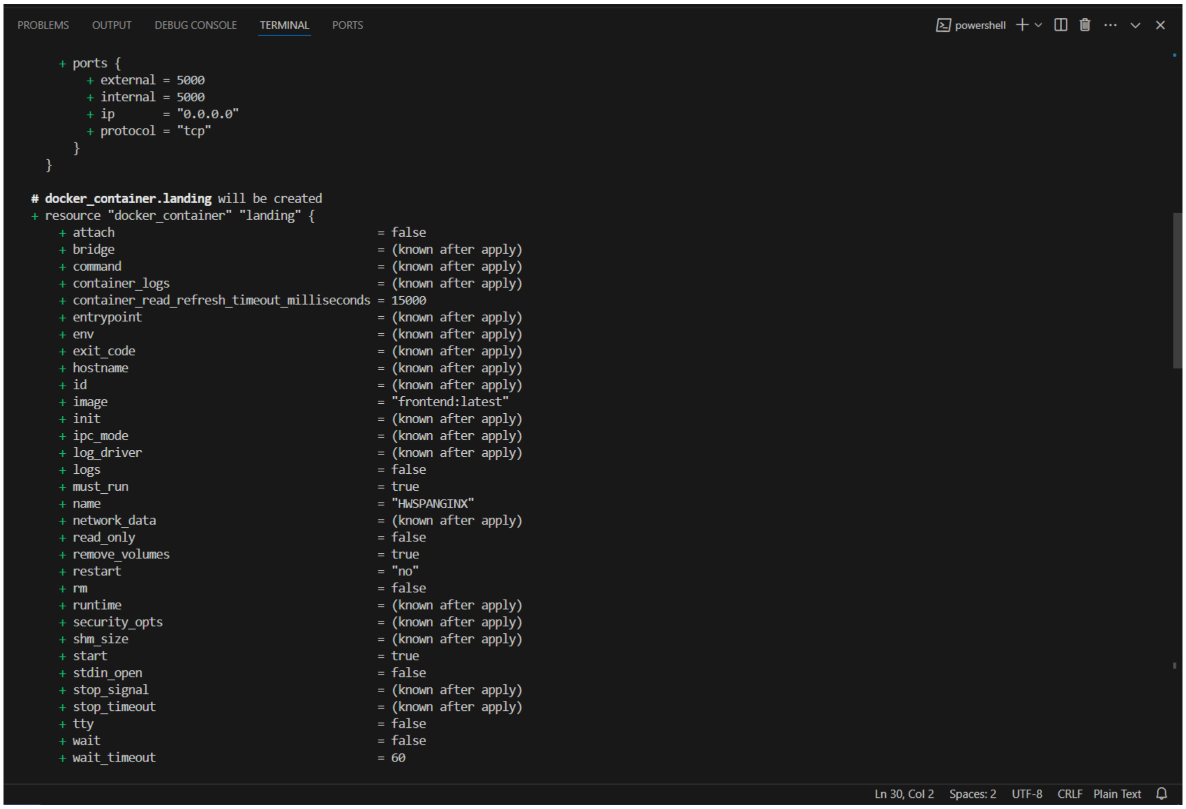


```
# Definición del tercer contenedor
resource "docker_container" "mongodb"
  name  = "NoRelacional"
  image = "bitnami/mongodb:latest"
  ports {
    internal = 27017
    external = 27017
  }
}
```

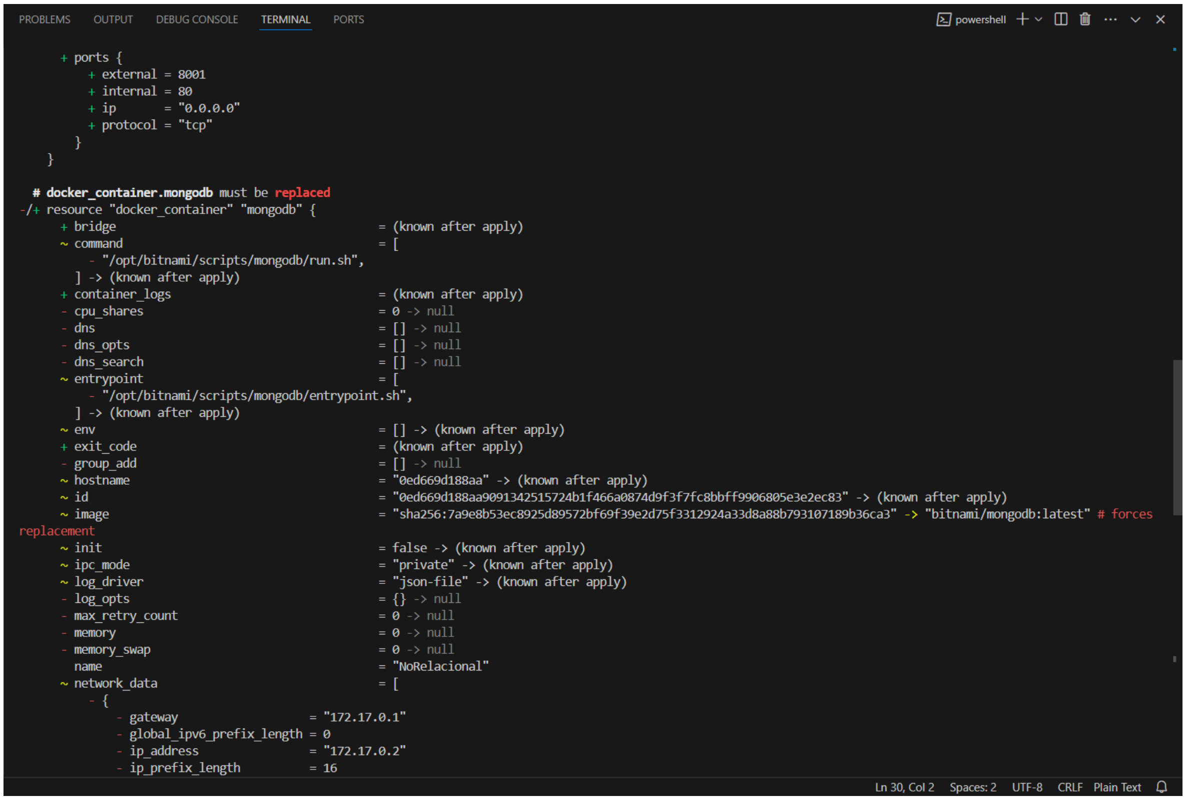
Ejecución de terraform init y apply del main.tf para el lanzamiento de las capas



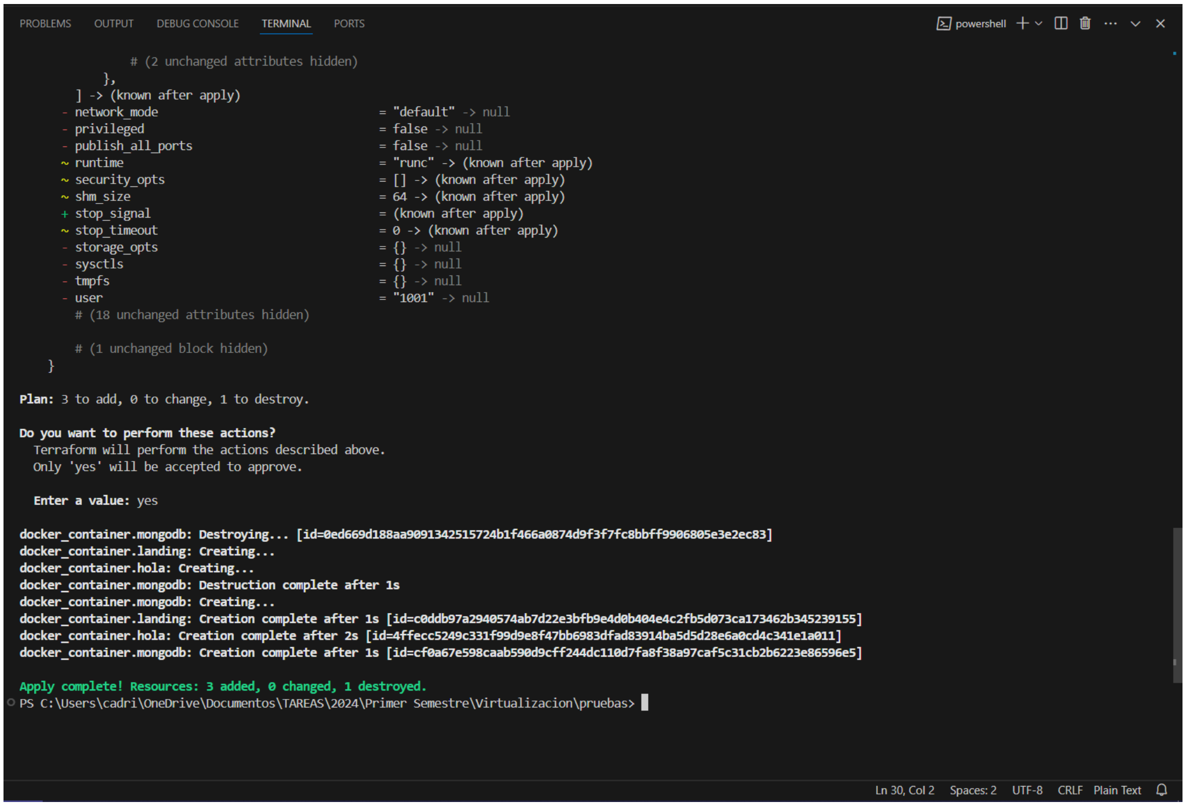
```
PS C:\Users\cadri\OneDrive\Documentos\TAREAS\2024\Primer Semestre\Virtualizacion\pruebas> terraform apply
docker_container.mongodb: Refreshing state... [id=0ed669d188aa9091342515724b1f466a0874d9f3f7fc8bbff9906805e3e2ec83]

Terraform used the selected providers to generate the following execution plan. Resource actions are indicated with the following symbols:
  + create
-/+ destroy and then create replacement

Terraform will perform the following actions:

  # docker_container.hola will be created
  + resource "docker_container" "hola" {
      + attach                                      = false
      + bridge                                      = (known after apply)
      + command                                     = (known after apply)
      + container_logs                              = (known after apply)
      + container_read_refresh_timeout_milliseconds = 15000
      + entrypoint                                  = (known after apply)
      + env                                         = (known after apply)
      + exit_code                                   = (known after apply)
      + hostname                                    = (known after apply)
      + id                                          = (known after apply)
      + image                                       = "backend:latest"
      + init                                        = (known after apply)
      + ipc_mode                                    = (known after apply)
      + log_driver                                  = (known after apply)
      + logs                                        = false
      + must_run                                    = true
      + name                                        = "HWAPINGINX"
      + network_data                                = (known after apply)
      + read_only                                   = false
      + remove_volumes                              = true
      + restart                                     = "no"
      + rm                                          = false
      + runtime                                     = (known after apply)
      + security_opts                               = (known after apply)
      + shm_size                                    = (known after apply)
      + start                                       = true
      + stdin_open                                  = false
      + stop_signal                                 = (known after apply)
      + stop_timeout                                = (known after apply)
      + tty                                         = false
      + wait                                        = false
      + wait_timeout                                = 60
```



```
      + ports {
          + external = 5000
          + internal = 5000
          + ip       = "0.0.0.0"
          + protocol = "tcp"
        }
    }

  # docker_container.landing will be created
  + resource "docker_container" "landing" {
      + attach                                      = false
      + bridge                                      = (known after apply)
      + command                                     = (known after apply)
      + container_logs                              = (known after apply)
      + container_read_refresh_timeout_milliseconds = 15000
      + entrypoint                                  = (known after apply)
      + env                                         = (known after apply)
      + exit_code                                   = (known after apply)
      + hostname                                    = (known after apply)
      + id                                          = (known after apply)
      + image                                       = "frontend:latest"
      + init                                        = (known after apply)
      + ipc_mode                                    = (known after apply)
      + log_driver                                  = (known after apply)
      + logs                                        = false
      + must_run                                    = true
      + name                                        = "HWSPANGINX"
      + network_data                                = (known after apply)
      + read_only                                   = false
      + remove_volumes                              = true
      + restart                                     = "no"
      + rm                                          = false
      + runtime                                     = (known after apply)
      + security_opts                               = (known after apply)
      + shm_size                                    = (known after apply)
      + start                                       = true
      + stdin_open                                  = false
      + stop_signal                                 = (known after apply)
      + stop_timeout                                = (known after apply)
      + tty                                         = false
      + wait                                        = false
      + wait_timeout                                = 60
```

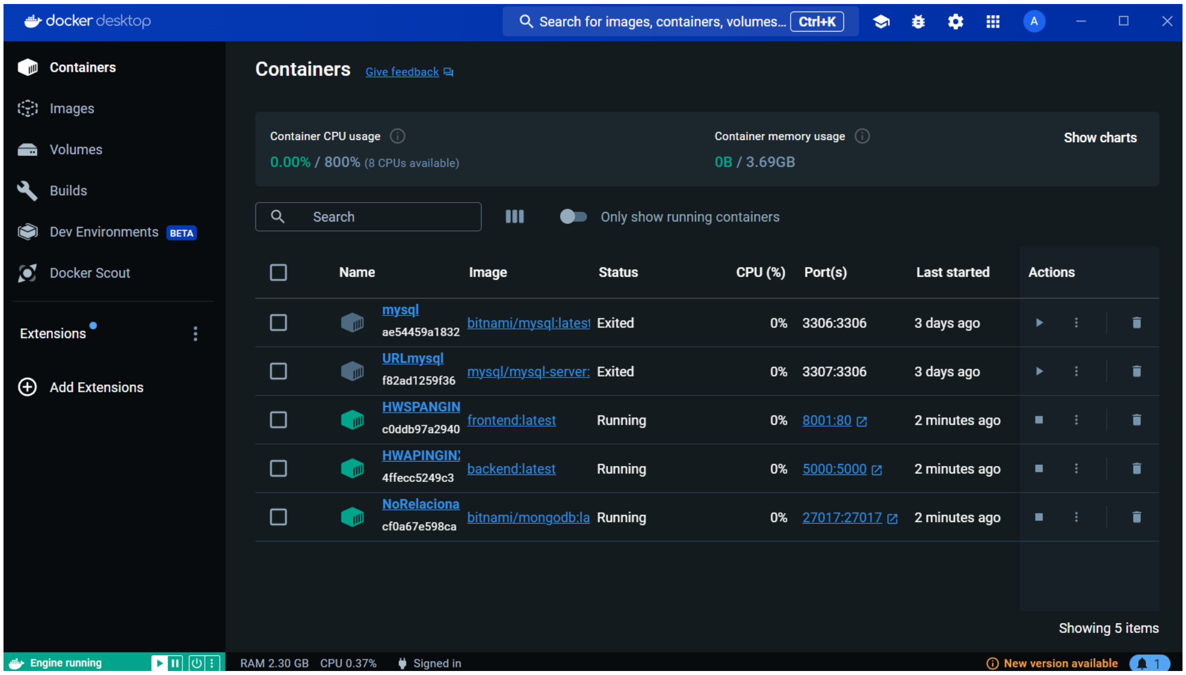


```
      + ports {
          + external = 8001
          + internal = 80
          + ip       = "0.0.0.0"
          + protocol = "tcp"
        }
    }

  # docker_container.mongodb must be replaced
-/+ resource "docker_container" "mongodb" {
      + bridge                                      = (known after apply)
      ~ command                                     = [
          - "/opt/bitnami/scripts/mongodb/run.sh",
        ] -> (known after apply)
      + container_logs                              = (known after apply)
      - cpu_shares                                  = 0 -> null
      - dns                                         = [] -> null
      - dns_opts                                    = [] -> null
      - dns_search                                  = [] -> null
      ~ entrypoint                                  = [
          - "/opt/bitnami/scripts/mongodb/entrypoint.sh",
        ] -> (known after apply)
      ~ env                                         = [] -> (known after apply)
      + exit_code                                   = (known after apply)
      - group_add                                   = [] -> null
      ~ hostname                                    = "0ed669d188aa" -> (known after apply)
      ~ id                                          = "0ed669d188aa9091342515724b1f466a0874d9f3f7fc8bbff9906805e3e2ec83" -> (known after apply)
      ~ image                                       = "sha256:7a9e8b53ec8925d89572bf69f39e2d75f3312924a33d8a88b793107189b36ca3" -> "bitnami/mongodb:latest" # forces
replacement
      ~ init                                        = false -> (known after apply)
      ~ ipc_mode                                    = "private" -> (known after apply)
      ~ log_driver                                  = "json-file" -> (known after apply)
      - log_opts                                    = {} -> null
      - max_retry_count                             = 0 -> null
      - memory                                      = 0 -> null
      - memory_swap                                 = 0 -> null
        name                                        = "NoRelacional"
      ~ network_data                                = [
          - {
              - gateway                   = "172.17.0.1"
              - global_ipv6_prefix_length = 0
              - ip_address                = "172.17.0.2"
              - ip_prefix_length          = 16
```



```
                # (2 unchanged attributes hidden)
            },
        ] -> (known after apply)
      - network_mode                                = "default" -> null
      - privileged                                  = false -> null
      - publish_all_ports                           = false -> null
      ~ runtime                                     = "runc" -> (known after apply)
      ~ security_opts                               = [] -> (known after apply)
      ~ shm_size                                    = 64 -> (known after apply)
      + stop_signal                                 = (known after apply)
      ~ stop_timeout                                = 0 -> (known after apply)
      - storage_opts                                = {} -> null
      - sysctls                                     = {} -> null
      - tmpfs                                       = {} -> null
      - user                                        = "1001" -> null
        # (18 unchanged attributes hidden)

        # (1 unchanged block hidden)
    }

Plan: 3 to add, 0 to change, 1 to destroy.

Do you want to perform these actions?
  Terraform will perform the actions described above.
  Only 'yes' will be accepted to approve.

  Enter a value: yes

docker_container.mongodb: Destroying... [id=0ed669d188aa9091342515724b1f466a0874d9f3f7fc8bbff9906805e3e2ec83]
docker_container.landing: Creating...
docker_container.hola: Creating...
docker_container.mongodb: Destruction complete after 1s
docker_container.mongodb: Creating...
docker_container.landing: Creation complete after 1s [id=c0ddb97a2940574ab7d22e3bfb9e4d0b404e4c2fb5d073ca173462b345239155]
docker_container.hola: Creation complete after 2s [id=4ffecc5249c331f99d9e8f47bb6983dfad83914ba5d5d28e6a0cd4c341e1a011]
docker_container.mongodb: Creation complete after 1s [id=cf0a67e598caab590d9cff244dc110d7fa8f38a97caf5c31cb2b6223e86596e5]

Apply complete! Resources: 3 added, 0 changed, 1 destroyed.
PS C:\Users\cadri\OneDrive\Documentos\TAREAS\2024\Primer Semestre\Virtualizacion\pruebas> 
```

Vista final de Docker posterior a la ejecucion del comando terraform apply



Containers

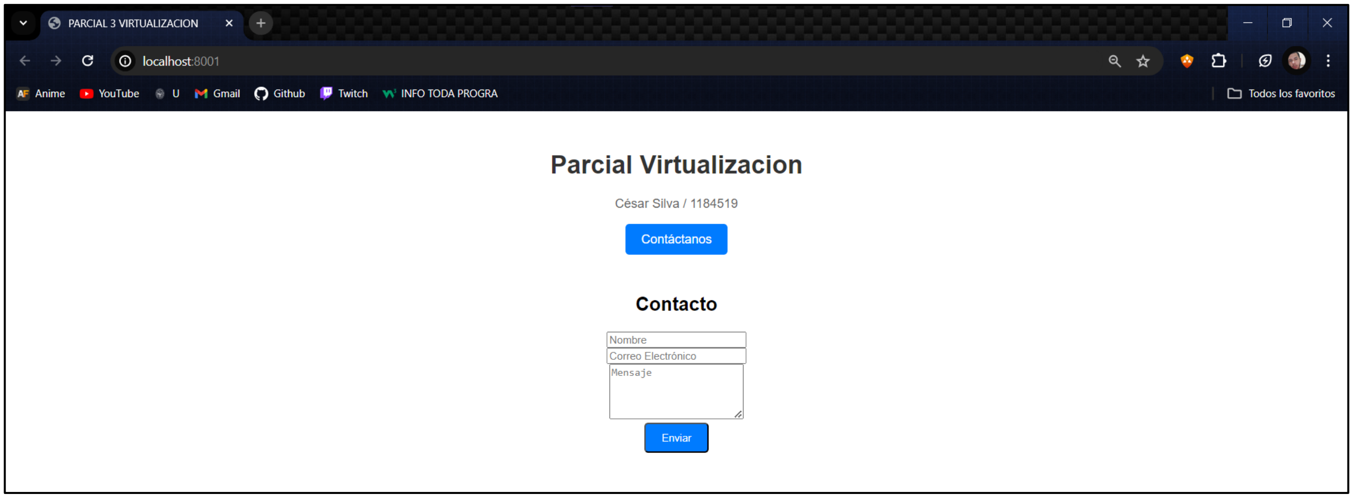
Container CPU usage: 0.00% / 800% (8 CPUs available)

Container memory usage: 0B / 3.69GB

☐	Name	Image	Status	CPU (%)	Port(s)	Last started	Actions
☐	mysql ae54459a1832	bitnami/mysql:latest	Exited	0%	3306:3306	3 days ago	▶ ⋮ 🗑
☐	URLmysql f82ad1259f36	mysql/mysql-server:	Exited	0%	3307:3306	3 days ago	▶ ⋮ 🗑
☐	HWSPANGIN c0ddb97a2940	frontend:latest	Running	0%	8001:80	2 minutes ago	■ ⋮ 🗑
☐	HWAPINGIN) 4ffecc5249c3	backend:latest	Running	0%	5000:5000	2 minutes ago	■ ⋮ 🗑
☐	NoRelaciona cf0a67e598ca	bitnami/mongodb:la	Running	0%	27017:27017	2 minutes ago	■ ⋮ 🗑

Showing 5 items

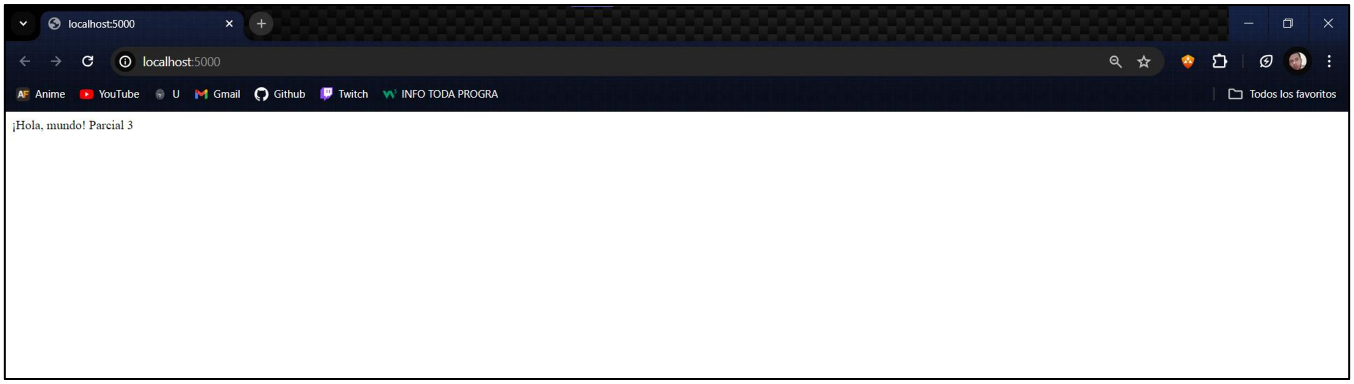
Vista de lo ejecutado



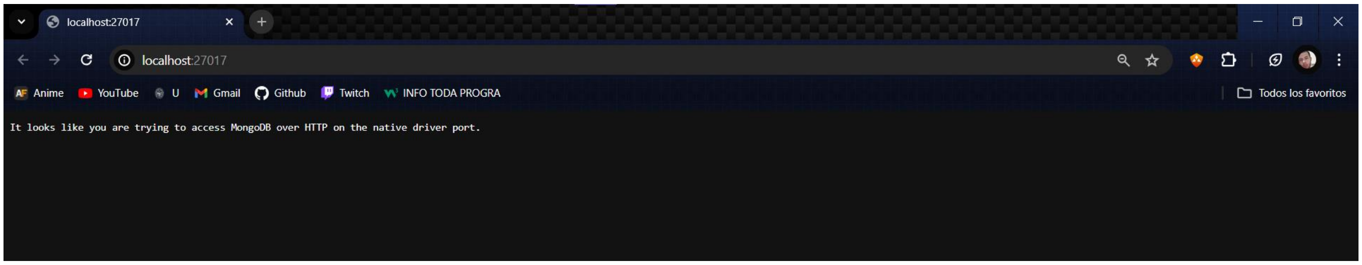
Parcial Virtualizacion

César Silva / 1184519

Contacto



¡Hola, mundo! Parcial 3



```
It looks like you are trying to access MongoDB over HTTP on the native driver port.
```

Para el caso de MongoDB como base no relacional, se accede desde una aplicación que permita ver y modificar datos dentro de la página al estar en ejecución.