

Universidad Rafael Landívar  
Facultad de Ingeniería  
Ingeniería Electrónica y Telecomunicaciones  
Tecnologías de Virtualización y Data Centers  
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**LABORATORIO**  
**CONTENEDORES**

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## CONTENEDORES:

Es una forma de empaquetar, distribuir y ejecutar aplicaciones de software de manera consistente en entornos de desarrollo y producción. Google ofrece su servicio de administración de contenedores llamado Google Kubernetes, que facilita la implementación y administración de contenedores en la nube. Las características principales de los contenedores son:

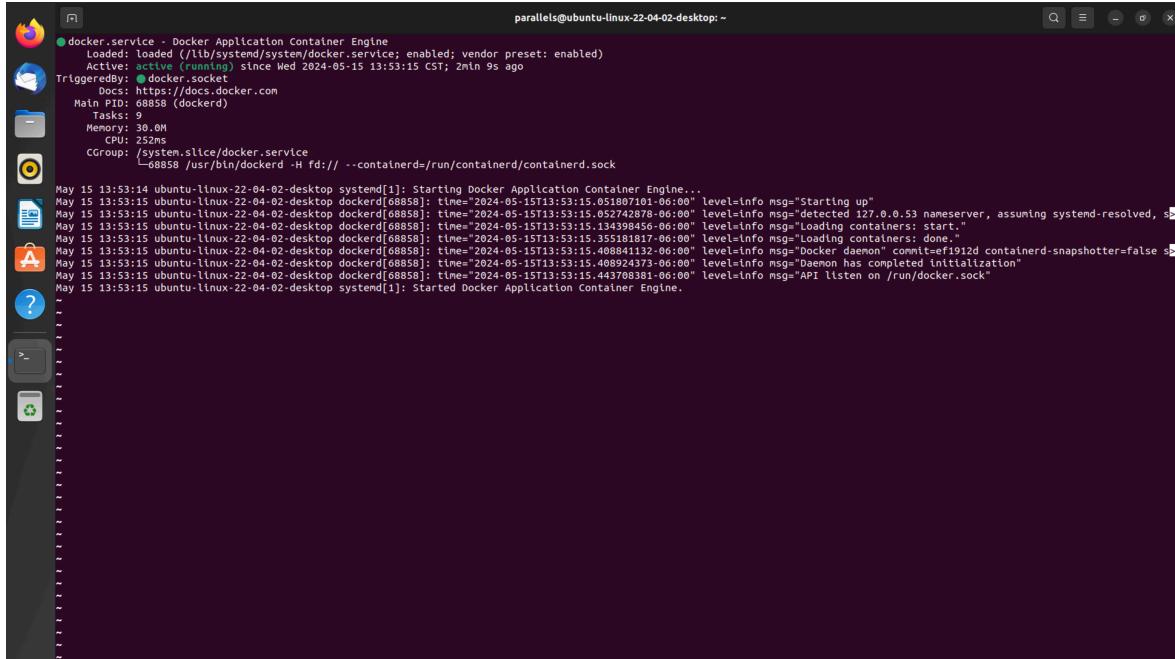
- **Empaquetamiento consistente:** encapsulan el código, las dependencias y la configuración de una aplicación en una unidad única que se puede mover fácilmente entre entornos de desarrollo, prueba y producción.
- **Aislamiento y Portabilidad:** Cada contenedor se ejecuta de forma aislada en su propio entorno, garantizando que las aplicaciones no interfieran entre sí. Estos se pueden ejecutar en cualquier entorno compatible con contenedores.

## CONSTRUCCIÓN DEL CONTENEDOR EN UN SERVIDOR LOCAL DE DESARROLLO:

Se procedió a realizar la instalación de Docker en Ubuntu, debido a que la arquitectura que se está utilizando en la Macbook es ARM, se debió editar el comando brindado en el laboratorio por:

```
sudo add-apt-repository "deb [arch=arm64]
https://download.docker.com/linux/ubuntu ${lsb_release -cs} stable"
```

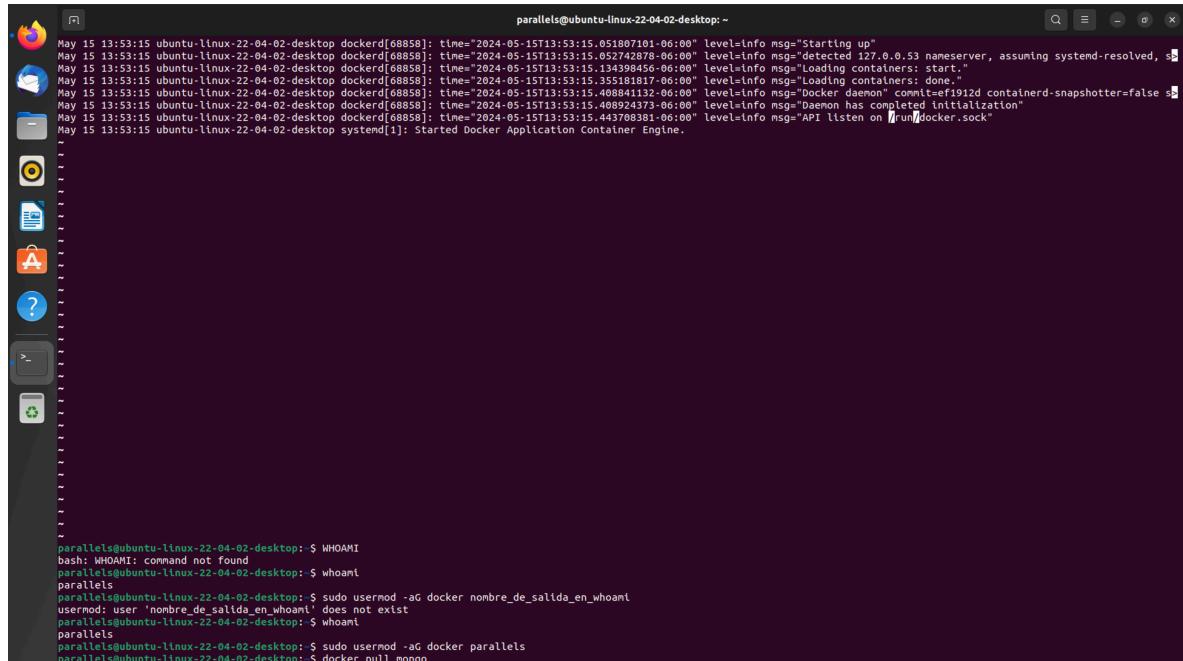
## VERIFICANDO LA INSTALACIÓN DE DOCKER:



The screenshot shows a terminal window on a Linux desktop environment. The title bar reads "parallels@ubuntu-linux-22-04-02-desktop: ~". The terminal displays the output of the command "journalctl -u docker.service". The logs show the Docker daemon starting up and initializing containers. Key log entries include:

```
May 15 13:53:14 ubuntu-linux-22-04-02-desktop systemd[1]: Starting Docker Application Container Engine...
May 15 13:53:15 ubuntu-linux-22-04-02-desktop dockerd[68858]: time="2024-05-15T13:53:15.051807101+00:00" level=info msg="Starting up"
May 15 13:53:15 ubuntu-linux-22-04-02-desktop dockerd[68858]: time="2024-05-15T13:53:15.057742878+00:00" level=info msg="detected 127.0.0.53 nameserver, assuming systemd-resolved, skipping /etc/resolv.conf"
May 15 13:53:15 ubuntu-linux-22-04-02-desktop dockerd[68858]: time="2024-05-15T13:53:15.134398456+00:00" level=info msg="Loading containers: start."
May 15 13:53:15 ubuntu-linux-22-04-02-desktop dockerd[68858]: time="2024-05-15T13:53:15.355181917+00:00" level=info msg="Loading containers: done."
May 15 13:53:15 ubuntu-linux-22-04-02-desktop dockerd[68858]: time="2024-05-15T13:53:15.408841132+00:00" level=info msg="Docker daemon" commit=ef1912d containerd-snapshotter=false snappy=true
May 15 13:53:15 ubuntu-linux-22-04-02-desktop dockerd[68858]: time="2024-05-15T13:53:15.408924373+00:00" level=info msg="Daemon has completed initialization"
May 15 13:53:15 ubuntu-linux-22-04-02-desktop dockerd[68858]: time="2024-05-15T13:53:15.4437089381+00:00" level=info msg="API listen on /run/docker.sock"
May 15 13:53:15 ubuntu-linux-22-04-02-desktop systemd[1]: Started Docker Application Container Engine.
```

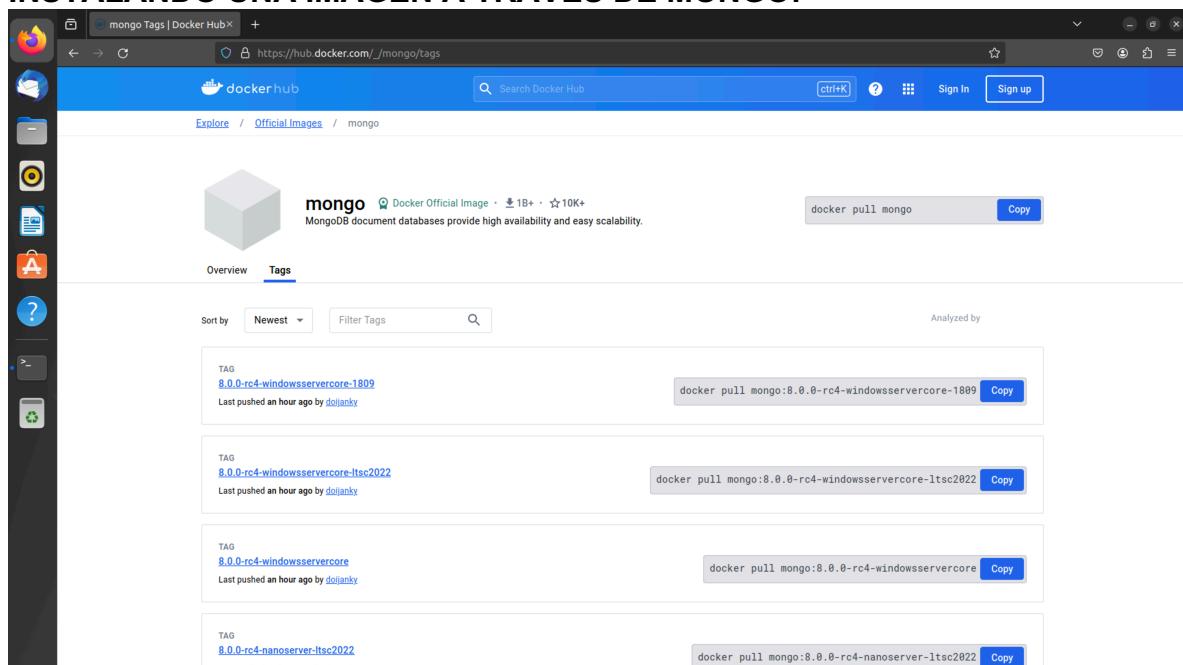
## IDENTIFICANDO AL SISTEMA Y CREANDO UN USUARIO:

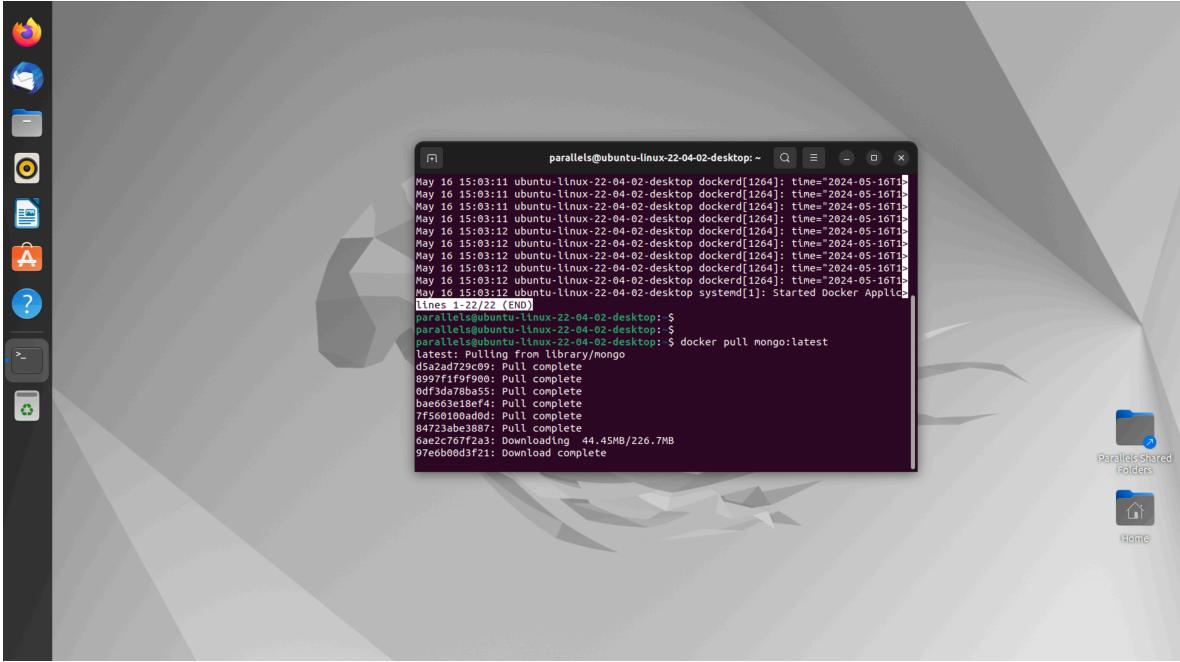


```
parallels@ubuntu-linux-22-04-02-desktop: ~
May 15 13:53:15 ubuntu-linux-22-04-02-desktop dockerd[68858]: time="2024-05-15T13:53:15.051807101+00:00" level=info msg="Starting up"
May 15 13:53:15 ubuntu-linux-22-04-02-desktop dockerd[68858]: time="2024-05-15T13:53:15.052742878+00:00" level=info msg="detected 127.0.0.53 nameserver, assuming systemd-resolved, skipping resolv.conf update"
May 15 13:53:15 ubuntu-linux-22-04-02-desktop dockerd[68858]: time="2024-05-15T13:53:15.134398456+00:00" level=info msg="Loading containerd"
May 15 13:53:15 ubuntu-linux-22-04-02-desktop dockerd[68858]: time="2024-05-15T13:53:15.355181817+00:00" level=info msg="Loading containerd: done."
May 15 13:53:15 ubuntu-linux-22-04-02-desktop dockerd[68858]: time="2024-05-15T13:53:15.408841132+00:00" level=info msg="Docker daemon" commit=ef1912d containerd-snapshotter=false snapshotter=overlay2
May 15 13:53:15 ubuntu-linux-22-04-02-desktop dockerd[68858]: time="2024-05-15T13:53:15.408924773+00:00" level=info msg="Daemon has completed initialization"
May 15 13:53:15 ubuntu-linux-22-04-02-desktop dockerd[68858]: time="2024-05-15T13:53:15.443708381+00:00" level=info msg="API listen on /var/run/docker.sock"
May 15 13:53:15 ubuntu-linux-22-04-02-desktop systemd[1]: Started Docker Application Container Engine

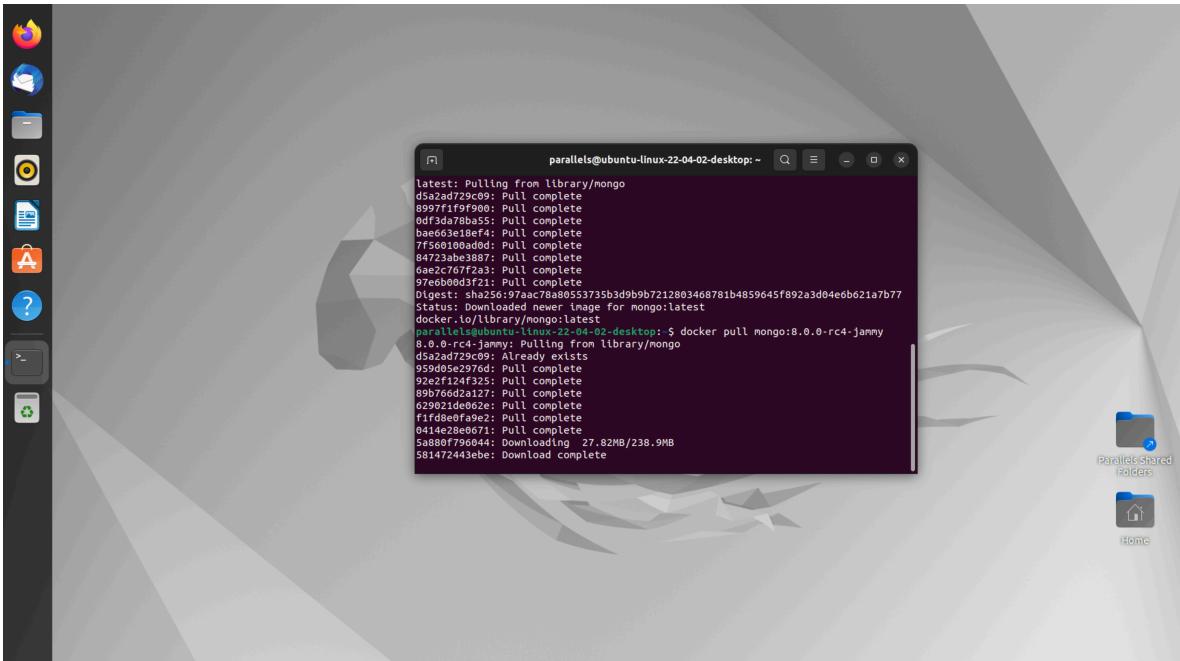
parallels@ubuntu-linux-22-04-02-desktop: ~ WHOAMI
bash: WHOAMI: command not found
parallels@ubuntu-linux-22-04-02-desktop: ~ whoami
parallels
parallels@ubuntu-linux-22-04-02-desktop: ~ sudo usermod -aG docker nombre_de_salida_en_whoami
usermod: user 'nombre_de_salida_en_whoami' does not exist
parallels@ubuntu-linux-22-04-02-desktop: ~ whoami
parallels
parallels@ubuntu-linux-22-04-02-desktop: ~ sudo usermod -aG docker parallels
parallels@ubuntu-linux-22-04-02-desktop: ~ docker pull mongo
```

## INSTALANDO UNA IMAGEN A TRAVÉS DE MONGO:





## DESCARGANDO UNA IMAGEN DISTINTA DE LA DE MONGO:LATEST:



## VERIFICANDO LAS DIFERENCIAS ENTRE LAS IMÁGENES DESCARGADAS:

```
parallels@ubuntu-linux-22-04-02-desktop: ~
6ae2c767f2a3: Pull complete
97e6b00d3f21: Pull complete
Digest: sha256:97aac78a80553735b3d9b9b7212803468781b4859645f892a3d04e6b621a7b77
Status: Downloaded newer image for mongo:latest
docker.io/library/mongo:latest
parallels@ubuntu-linux-22-04-02-desktop:~$ docker pull mongo:8.0.0-rc4-jammy
8.0.0-rc4-jammy: Pulling from library/mongo
d5a2ad729c09: Already exists
959d05e2976d: Pull complete
92e2f124f325: Pull complete
89b766d2a127: Pull complete
629021de062e: Pull complete
f1fd8e0fa9e2: Pull complete
0414e28e0671: Pull complete
5a880f796044: Pull complete
581472443ebe: Pull complete
Digest: sha256:50d09fc5aa185fb4c7b60d3aada9d66c4882880e3731f10ed88a14282b9688bf
Status: Downloaded newer image for mongo:8.0.0-rc4-jammy
docker.io/library/mongo:8.0.0-rc4-jammy
parallels@ubuntu-linux-22-04-02-desktop:~$ docker images
REPOSITORY      TAG          IMAGE ID      CREATED       SIZE
mongo           8.0.0-rc4-jammy   d9ee4ea8ba7a   2 days ago   823MB
mongo           latest        5c06ba83b1d2   2 weeks ago  760MB
parallels@ubuntu-linux-22-04-02-desktop:~$
```

## CREACIÓN DE UNA IMAGEN Y DEL CONTENEDOR:

```
[+] Building 18.8s (6/6) FINISHED
=> [internal] load build definition from Dockerfile
=> => transferring dockerfile: 77B
=> [internal] load metadata for docker.io/library/centos:7
=> [internal] load .dockerignore
=> => transferring context: 2B
=> [1/2] FROM docker.io/library/centos:7@sha256:be65f488b7764ad3638f236b7b515b3678369a512
=> => resolve docker.io/library/centos:7@sha256:be65f488b7764ad3638f236b7b515b3678369a512
=> => sha256:be65f488b7764ad3638f236b7b515b3678369a5124c47b8d32916d648741 1.20kB / 1.20kB
=> => sha256:73f11afcbb50d8bc70eab9f0850b3fa30e61a419bc48cf426e63527d14a8373b 530B / 530B
=> => sha256:c9a1fdca3387618f8634949de4533419327736e2f5c618e3fbebe877aa33 2.77kB / 2.77kB
=> => sha256:6717b8ec66cd6add0272c6391165585613c31314a43ff77d9751b530 108.37MB / 108.37MB
=> => extracting sha256:6717b8ec66cd6add0272c6391165585613c31314a43ff77d9751b53010e531ec 3.2s
=> [2/2] RUN yum install httpd -y
=> exporting to image
=> => exporting layers
=> => writing image sha256:b4e3648a79894015fc658a5a32505a12c591256e2b65098fa5262a8d94a5fc
=> => naming to docker.io/library/apache-centos
parallels@ubuntu-linux-22-04-02-desktop:~/docker-images$ docker images
REPOSITORY      TAG          IMAGE ID      CREATED       SIZE
apache-centos  latest        b4e3648a7989   About a minute ago  424MB
mongo           8.0.0-rc4-jammy   d9ee4ea8ba7a   2 days ago   823MB
mongo           latest        5c06ba83b1d2   2 weeks ago  760MB
parallels@ubuntu-linux-22-04-02-desktop:~/docker-images$
```

```
[+]
parallels@ubuntu-linux-22-04-02-desktop: ~/docker-images          Q   -   X
=> => resolve docker.io/library/centos:7@sha256:be65f488b7764ad3638f236b7b515b3678369a512
=> => sha256:be65f488b7764ad3638f236b7b515b3678369a5124c47b8d32916d648741 1.20kB / 1.20kB 0.0s
=> => sha256:73f11afcbb50d8bc70eab9f0850b3fa30e61a419bc48cf426e63527d14a8373b 530B / 530B 0.0s
=> => sha256:c9a1fdca3387618f8634949de4533419327736e2f5c618e3bfebe877aa33 2.77kB / 2.77kB 0.0s
=> => sha256:6717b8ec66cd6add0272c6391165585613c31314a43ff77d9751b530 108.37MB / 108.37MB 4.4s
=> => extracting sha256:6717b8ec66cd6add0272c6391165585613c31314a43ff77d9751b53010e531ec 3.2s
=> [2/2] RUN yum install httpd -y                                     9.2s
=> exporting to image                                              0.2s
=> => exporting layers                                              0.2s
=> => writing image sha256:b4e3648a79894015fc658a5a32505a12c591256e2b65098fa5262a8d94a5fc 0.0s
=> => naming to docker.io/library/apache-centos                      0.0s
parallels@ubuntu-linux-22-04-02-desktop:~/docker-images$ docker images
REPOSITORY      TAG          IMAGE ID      CREATED       SIZE
apache-centos   latest       b4e3648a7989   About a minute ago  424MB
mongo           8.0.0-rc4-jammy d9ee4ea8ba7a   2 days ago    823MB
mongo           latest       5c06ba83b1d2   2 weeks ago   760MB
parallels@ubuntu-linux-22-04-02-desktop:~/docker-images$ docker history -H apache-centos:latest
IMAGE          CREATED      CREATED BY          SIZE      COMMENT
b4e3648a7989   22 minutes ago RUN /bin/sh -c yum install httpd -y # buildk... 123MB  buildki
t.dockerfile.v0
<missing>     2 years ago   /bin/sh -c #(nop) CMD ["/bin/bash"]        0B
<missing>     2 years ago   /bin/sh -c #(nop) LABEL org.label-schema.sc... 0B
<missing>     2 years ago   /bin/sh -c #(nop) ADD file:5b1e63a3cb041177b... 301MB
parallels@ubuntu-linux-22-04-02-desktop:~/docker-images$
```

```
[+]
parallels@ubuntu-linux-22-04-02-desktop: ~/docker-images          Q   -   X
parallels@ubuntu-linux-22-04-02-desktop:~/docker-images$ docker images
REPOSITORY      TAG          IMAGE ID      CREATED       SIZE
apache-centos   latest       b4e3648a7989   About a minute ago  424MB
mongo           8.0.0-rc4-jammy d9ee4ea8ba7a   2 days ago    823MB
mongo           latest       5c06ba83b1d2   2 weeks ago   760MB
parallels@ubuntu-linux-22-04-02-desktop:~/docker-images$ docker history -H apache-centos:latest
IMAGE          CREATED      CREATED BY          SIZE      COMMENT
b4e3648a7989   22 minutes ago RUN /bin/sh -c yum install httpd -y # buildk... 123MB  buildki
t.dockerfile.v0
<missing>     2 years ago   /bin/sh -c #(nop) CMD ["/bin/bash"]        0B
<missing>     2 years ago   /bin/sh -c #(nop) LABEL org.label-schema.sc... 0B
<missing>     2 years ago   /bin/sh -c #(nop) ADD file:5b1e63a3cb041177b... 301MB
parallels@ubuntu-linux-22-04-02-desktop:~/docker-images$ docker run -d --name apache apache-cento
s:latest
unknown shorthand flag: '-' in ---
See 'docker run --help'.
parallels@ubuntu-linux-22-04-02-desktop:~/docker-images$ docker run -d --name apache apache-cen
tos:latest
docker: invalid reference format.
See 'docker run --help'.
parallels@ubuntu-linux-22-04-02-desktop:~/docker-images$ docker run -d --name apache apache-cen
tos:latest
37c0b39306dae02ae02115ce332bee666a6df419e62898b403c05d8908600e3b
parallels@ubuntu-linux-22-04-02-desktop:~/docker-images$
```

```
[+]
parallels@ubuntu-linux-22-04-02-desktop: ~/docker-images   Q  ⌂  X
b4e3648a7989  22 minutes ago  RUN /bin/sh -c yum install httpd -y # buildk...  123MB  buildki
t.dockerfile.v0
<missing>    2 years ago    /bin/sh -c #(nop)  CMD ["/bin/bash"]      0B
<missing>    2 years ago    /bin/sh -c #(nop)  LABEL org.label-schema.sc...  0B
<missing>    2 years ago    /bin/sh -c #(nop) ADD file:5b1e63a3cb041177b...  301MB
parallels@ubuntu-linux-22-04-02-desktop:~/docker-images$ docker run -d --name apache apache-cento
s:latest
unknown shorthand flag: '-' in ---
See 'docker run --help'.
parallels@ubuntu-linux-22-04-02-desktop:~/docker-images$ docker run -d --name apache apache-cen
tos:latest
docker: invalid reference format.
See 'docker run --help'.
parallels@ubuntu-linux-22-04-02-desktop:~/docker-images$ docker run -d --name apache apache-cen
tos:latest
37c0b39306dae02ae02115ce332bee666a6df419e62898b403c05d8908600e3b
parallels@ubuntu-linux-22-04-02-desktop:~/docker-images$ docker ps
CONTAINER ID  IMAGE      COMMAND   CREATED   STATUS    PORTS      NAMES
parallels@ubuntu-linux-22-04-02-desktop:~/docker-images$ docker ps -a
CONTAINER ID  IMAGE      COMMAND   CREATED   STATUS    PORTS      NAMES
PORTS      NAMES
37c0b39306da  apache-centos:latest  "/bin/bash"  40 seconds ago  Exited (0) 39 seconds ago
          apache
parallels@ubuntu-linux-22-04-02-desktop:~/docker-images$
```

```
[+]
parallels@ubuntu-linux-22-04-02-desktop: ~/docker-images   Q  ⌂  X
parallels@ubuntu-linux-22-04-02-desktop:~/docker-images$ docker run -d --name apache apache-cen
tos:latest
docker: invalid reference format.
See 'docker run --help'.
parallels@ubuntu-linux-22-04-02-desktop:~/docker-images$ docker run -d --name apache apache-cen
tos:latest
37c0b39306dae02ae02115ce332bee666a6df419e62898b403c05d8908600e3b
parallels@ubuntu-linux-22-04-02-desktop:~/docker-images$ docker ps
CONTAINER ID  IMAGE      COMMAND   CREATED   STATUS    PORTS      NAMES
parallels@ubuntu-linux-22-04-02-desktop:~/docker-images$ docker ps -a
CONTAINER ID  IMAGE      COMMAND   CREATED   STATUS    PORTS      NAMES
PORTS      NAMES
37c0b39306da  apache-centos:latest  "/bin/bash"  40 seconds ago  Exited (0) 39 seconds ago
          apache
parallels@ubuntu-linux-22-04-02-desktop:~/docker-images$ docker rm -fv
"docker rm" requires at least 1 argument.
See 'docker rm --help'.

Usage:  docker rm [OPTIONS] CONTAINER [CONTAINER...]

Remove one or more containers
parallels@ubuntu-linux-22-04-02-desktop:~/docker-images$ docker rm -fv apache
apache
parallels@ubuntu-linux-22-04-02-desktop:~/docker-images$
```

## CREANDO UNA NUEVA IMAGEN:

```
parallels@ubuntu-linux-22-04-02-desktop: ~/docker-images
See 'docker rm --help'.

Usage: docker rm [OPTIONS] CONTAINER [CONTAINER...]

Remove one or more containers
parallels@ubuntu-linux-22-04-02-desktop:~/docker-images$ docker rm -fv apache
apache
parallels@ubuntu-linux-22-04-02-desktop:~/docker-images$ nano Dockerfile
parallels@ubuntu-linux-22-04-02-desktop:~/docker-images$ docker build --tag apache-centos:apache-cmd
ERROR: "docker buildx build" requires exactly 1 argument.
See 'docker buildx build --help'.

Usage: docker buildx build [OPTIONS] PATH | URL | -

Start a build
parallels@ubuntu-linux-22-04-02-desktop:~/docker-images$ docker build --tag apache-centos:apache-cmd .
[+] Building 1.0s (6/6) FINISHED                                            docker:default
=> [internal] load build definition from Dockerfile
=> => transferring dockerfile: 103B
=> [internal] load metadata for docker.io/library/centos:7
=> [internal] load .dockerrcignore
=> => transferring context: 2B
=> [1/2] FROM docker.io/library/centos:7@sha256:be65f488b7764ad3638f236b7b515b3678369a5124c47b8d32916d6487418ea4
=> CACHED [2/2] RUN yum install httpd -y
=> exporting to image
=> => exporting layers
=> => writing image sha256:324591263fb09f32ee24d0ba0eb0e33ab29a118d2b64fb5d6bc00beaf71f6562
=> => naming to docker.io/library/apache-centos:apache-cmd
parallels@ubuntu-linux-22-04-02-desktop:~/docker-images$
```

```
parallels@ubuntu-linux-22-04-02-desktop: ~/docker-images
apache
parallels@ubuntu-linux-22-04-02-desktop:~/docker-images$ nano Dockerfile
parallels@ubuntu-linux-22-04-02-desktop:~/docker-images$ docker build --tag apache-centos:apache-cmd
ERROR: "docker buildx build" requires exactly 1 argument.
See 'docker buildx build --help'.

Usage: docker buildx build [OPTIONS] PATH | URL | -

Start a build
parallels@ubuntu-linux-22-04-02-desktop:~/docker-images$ docker build --tag apache-centos:apache-cmd .
[+] Building 1.0s (6/6) FINISHED                                            docker:default
=> [internal] load build definition from Dockerfile
=> => transferring dockerfile: 103B
=> [internal] load metadata for docker.io/library/centos:7
=> [internal] load .dockerrcignore
=> => transferring context: 2B
=> [1/2] FROM docker.io/library/centos:7@sha256:be65f488b7764ad3638f236b7b515b3678369a5124c47b8d32916d6487418ea4
=> CACHED [2/2] RUN yum install httpd -y
=> exporting to image
=> => exporting layers
=> => writing image sha256:324591263fb09f32ee24d0ba0eb0e33ab29a118d2b64fb5d6bc00beaf71f6562
=> => naming to docker.io/library/apache-centos:apache-cmd
parallels@ubuntu-linux-22-04-02-desktop:~/docker-images$ docker images
REPOSITORY      TAG          IMAGE ID       CREATED        SIZE
apache-centos   latest       b4e3648a7989   37 minutes ago  424MB
apache-centos   apache-cmd   324591263fb0   37 minutes ago  424MB
mongo           8.0.0-rc4-jammy d9ee4ea8ba7a   2 days ago    823MB
mongo           latest      5c66ba83b1d2   2 weeks ago   760MB
parallels@ubuntu-linux-22-04-02-desktop:~/docker-images$
```

```

parallels@ubuntu-linux-22-04-02-desktop:~/docker-images$ docker build --tag apache-centos:apache-cmd .
[+] Building 1.0s (6/6) FINISHED
=> [internal] load build definition from Dockerfile
=> => transferring dockerfile: 103B
=> [internal] load metadata for docker.io/library/centos:7
=> [internal] load .dockerrcignore
=> => transferring context: 2B
=> [1/2] FROM docker.io/library/centos:7@sha256:be65f488b7764ad3638f236b7b515b3678369a5124c47b8d32916d6487418ea4
=> CACHED [2/2] RUN yum install httpd -y
=> exporting to image
=> => exporting layers
=> => writing image sha256:324591263fb09f32ee24d0ba0eb0e33ab29a118d2b64fb5d6bc00beaf71f6562
=> => naming to docker.io/library/apache-centos:apache-cmd
parallels@ubuntu-linux-22-04-02-desktop:~/docker-images$ docker images
REPOSITORY          TAG           IMAGE ID        CREATED          SIZE
apache-centos      latest         b4e3648a7989   37 minutes ago  424MB
apache-centos      apache-cmd    324591263fb0   37 minutes ago  424MB
mongo              8.0.0-rc4-jammy  d9ee4ea8ba7a   2 days ago       823MB
mongo              latest         5c06ba83b1d2   2 weeks ago      760MB
parallels@ubuntu-linux-22-04-02-desktop:~/docker-images$ docker history -H apache-centos:apache-cmd
IMAGE            CREATED          CREATED BY           SIZE      COMMENT
324591263fb0   39 minutes ago   CMD ["bin/sh" "-c" "apachectl -DFOREGROUND"] 0B      buildkit.dockerfile.v0
<missing>       39 minutes ago   RUN /bin/sh -c yum install httpd -y # buildk... 123MB    buildkit.dockerfile.v0
<missing>       2 years ago       /bin/sh -c #(nop) CMD ["/bin/bash"] 0B
<missing>       2 years ago       /bin/sh -c #(nop) LABEL org.label-schema.sc... 0B
<missing>       2 years ago       /bin/sh -c #(nop) ADD file:5b1e63a3cb041177b... 301MB
parallels@ubuntu-linux-22-04-02-desktop:~/docker-images$
```

## EJECUTANDO EL NUEVO CONTENEDOR:

```

parallels@ubuntu-linux-22-04-02-desktop:~/docker-images$ docker build --tag apache-centos:apache-cmd .
[+] Building 1.0s (6/6) FINISHED
=> [internal] load build definition from Dockerfile
=> => transferring dockerfile: 103B
=> [internal] load metadata for docker.io/library/centos:7
=> [internal] load .dockerrcignore
=> => transferring context: 2B
=> [1/2] FROM docker.io/library/centos:7@sha256:be65f488b7764ad3638f236b7b515b3678369a5124c47b8d32916d6487418ea4
=> CACHED [2/2] RUN yum install httpd -y
=> exporting to image
=> => exporting layers
=> => writing image sha256:324591263fb09f32ee24d0ba0eb0e33ab29a118d2b64fb5d6bc00beaf71f6562
=> => naming to docker.io/library/apache-centos:apache-cmd
parallels@ubuntu-linux-22-04-02-desktop:~/docker-images$ docker images
REPOSITORY          TAG           IMAGE ID        CREATED          SIZE
apache-centos      latest         b4e3648a7989   37 minutes ago  424MB
apache-centos      apache-cmd    324591263fb0   37 minutes ago  424MB
mongo              8.0.0-rc4-jammy  d9ee4ea8ba7a   2 days ago       823MB
mongo              latest         5c06ba83b1d2   2 weeks ago      760MB
parallels@ubuntu-linux-22-04-02-desktop:~/docker-images$ docker history -H apache-centos:apache-cmd
IMAGE            CREATED          CREATED BY           SIZE      COMMENT
324591263fb0   39 minutes ago   CMD ["bin/sh" "-c" "apachectl -DFOREGROUND"] 0B      buildkit.dockerfile.v0
<missing>       39 minutes ago   RUN /bin/sh -c yum install httpd -y # buildk... 123MB    buildkit.dockerfile.v0
<missing>       2 years ago       /bin/sh -c #(nop) CMD ["/bin/bash"] 0B
<missing>       2 years ago       /bin/sh -c #(nop) LABEL org.label-schema.sc... 0B
<missing>       2 years ago       /bin/sh -c #(nop) ADD file:5b1e63a3cb041177b... 301MB
parallels@ubuntu-linux-22-04-02-desktop:~/docker-images$ docker run -d --name apache -p 80:80 apache-centos:apache-cmd
fae4e08c22da82d80c7d65a27d8e4ebf2c23f8db3ea440d1ec8157996ec53133
parallels@ubuntu-linux-22-04-02-desktop:~/docker-images$ docker run -d --name apache -p 80:80 apache-centos:apache-cmd
```

## VERIFICANDO QUE EL CONTENEDOR SI ESTÉ EJECUTANDOSE:

The screenshot shows a web browser window with the URL `10.211.55.6` in the address bar. The page content is as follows:

# Testing 123..

This page is used to test the proper operation of the [Apache HTTP server](#) after it has been installed. If you can read this page it means that this site is working properly. This server is powered by [CentOS](#).

**Just visiting?**  
The website you just visited is either experiencing problems or is undergoing routine maintenance.

If you would like to let the administrators of this website know that you've seen this page instead of the page you expected, you should send them e-mail. In general, mail sent to the name "webmaster" and directed to the website's domain should reach the appropriate person.

For example, if you experienced problems while visiting `www.example.com`, you should send e-mail to "`webmaster@example.com`".

**Are you the Administrator?**  
You should add your website content to the directory `/var/www/html/`. To prevent this page from ever being used, follow the instructions in the file `/etc/httpd/conf.d/welcome.conf`.

**Promoting Apache and CentOS**  
You are free to use the images below on Apache and CentOS Linux powered HTTP servers. Thanks for using Apache and CentOS!

**Important note:**  
The CentOS Project has nothing to do with this website or its content, it just provides the software that makes the website run.

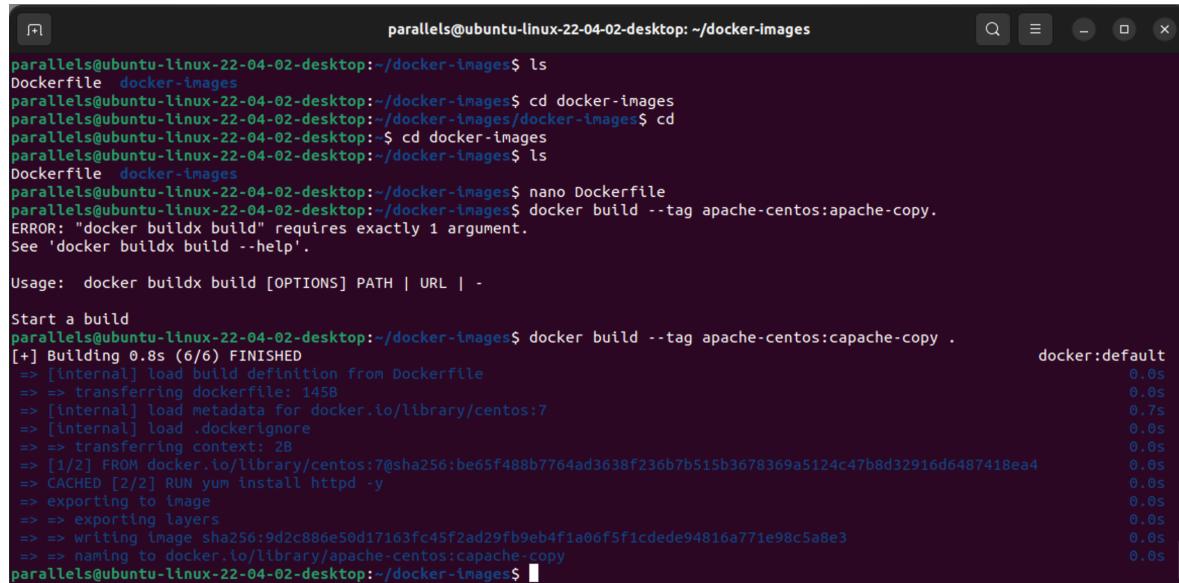
If you have issues with the content of this site, contact the owner of the domain, not the CentOS project. Unless you intended to visit [CentOS.org](#), the CentOS Project does not have anything to do with this website, the content or the lack of it.

For example, if this website is `www.example.com`, you would find the owner of the `example.com` domain at the following WHOIS server:

<http://www.internic.net/whois.html>

**The CentOS Project**  
The CentOS Linux distribution is a stable, predictable, manageable and reproducible platform derived from the sources of Red Hat Enterprise Linux (RHEL). Additionally to being a popular choice for web hosting, CentOS also provides a rich platform for open source communities to build upon. For more information please visit the [CentOS website](#).

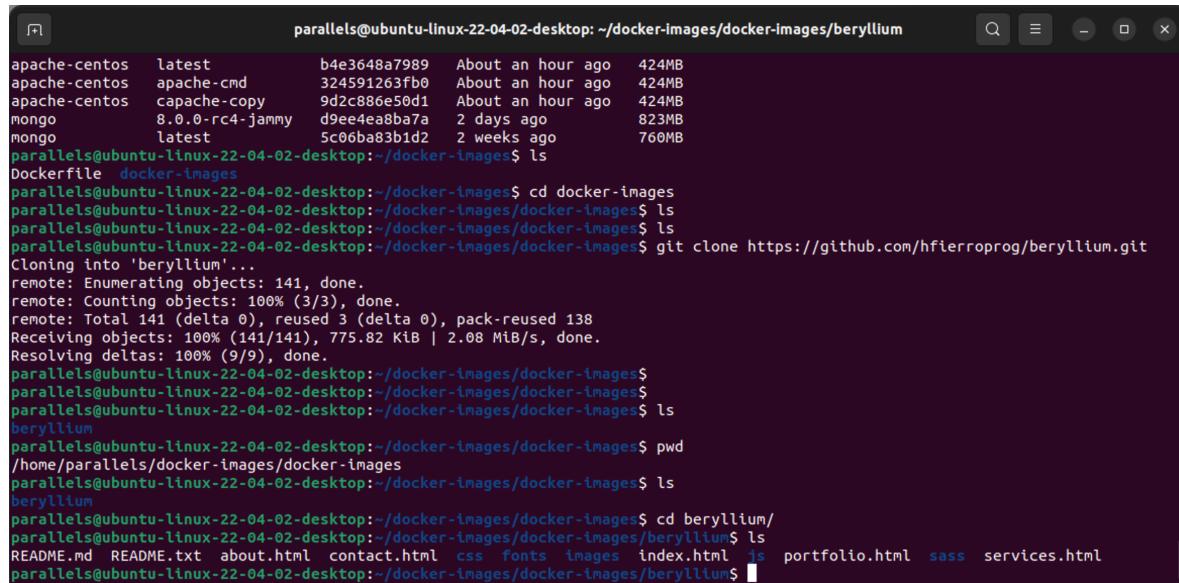
## CREACIÓN DE UNA IMAGEN CON CONTENIDO Y GENERANDO UN CONTENEDOR:



```
parallels@ubuntu-linux-22-04-02-desktop:~/docker-images$ ls
Dockerfile docker-images
parallels@ubuntu-linux-22-04-02-desktop:~/docker-images$ cd docker-images
parallels@ubuntu-linux-22-04-02-desktop:~/docker-images/docker-images$ cd
parallels@ubuntu-linux-22-04-02-desktop:~$ cd docker-images
parallels@ubuntu-linux-22-04-02-desktop:~/docker-images$ ls
Dockerfile docker-images
parallels@ubuntu-linux-22-04-02-desktop:~/docker-images$ nano Dockerfile
parallels@ubuntu-linux-22-04-02-desktop:~/docker-images$ docker build --tag apache-centos:apache-copy.
ERROR: "docker buildx build" requires exactly 1 argument.
See 'docker buildx build --help'.

Usage: docker buildx build [OPTIONS] PATH | URL | -

Start a build
parallels@ubuntu-linux-22-04-02-desktop:~/docker-images$ docker build --tag apache-centos:apache-copy .
[+] Building 0.8s (6/6) FINISHED
=> [internal] load build definition from Dockerfile
=> => transferring dockerfile: 1458
=> [internal] load metadata for docker.io/library/centos:7
=> [internal] load .dockerrcignore
=> => transferring context: 2B
=> [1/2] FROM docker.io/library/centos:7@sha256:be65f488b7764ad3638f236b7b515b3678369a5124c47b8d32916d6487418ea4
=> CACHED [2/2] RUN yum install httpd -y
=> => exporting to image
=> => exporting layers
=> => writing Image sha256:9d2c886e50d17163fc45f2ad29fb9eb4f1a06f5f1cdede94816a771e98c5a8e3
=> => naming to docker.io/library/apache-centos:apache-copy
=> => 0.0s
parallels@ubuntu-linux-22-04-02-desktop:~/docker-images$
```



```
parallels@ubuntu-linux-22-04-02-desktop:~/docker-images/docker-images/beryllium$ ls
apache-centos  latest      b4e3648a7989  About an hour ago  424MB
apache-centos  apache-cmd   324591263fb0  About an hour ago  424MB
apache-centos  apache-copy  9d2c886e50d1  About an hour ago  424MB
Mongo          8.0.0-rc4-jammy d9ee4ea8ba7a  2 days ago       823MB
Mongo          latest      5c06ba83b1d2  2 weeks ago      760MB
parallels@ubuntu-linux-22-04-02-desktop:~/docker-images$ ls
Dockerfile docker-images
parallels@ubuntu-linux-22-04-02-desktop:~/docker-images$ cd docker-images
parallels@ubuntu-linux-22-04-02-desktop:~/docker-images/docker-images$ ls
parallels@ubuntu-linux-22-04-02-desktop:~/docker-images$ ls
parallels@ubuntu-linux-22-04-02-desktop:~/docker-images$ git clone https://github.com/hfierroprog/beryllium.git
Cloning into 'beryllium'...
remote: Enumerating objects: 141, done.
remote: Counting objects: 100% (3/3), done.
remote: Total 141 (delta 0), reused 3 (delta 0), pack-reused 138
Receiving objects: 100% (141/141), 775.82 KiB | 2.08 MiB/s, done.
Resolving deltas: 100% (9/9), done.
parallels@ubuntu-linux-22-04-02-desktop:~/docker-images$ ls
parallels@ubuntu-linux-22-04-02-desktop:~/docker-images$ ls
parallels@ubuntu-linux-22-04-02-desktop:~/docker-images$ ls
beryllium
parallels@ubuntu-linux-22-04-02-desktop:~/docker-images$ pwd
/home/parallels/docker-images/docker-images
parallels@ubuntu-linux-22-04-02-desktop:~/docker-images$ ls
beryllium
parallels@ubuntu-linux-22-04-02-desktop:~/docker-images$ cd beryllium/
parallels@ubuntu-linux-22-04-02-desktop:~/docker-images/docker-images$ ls
README.md  README.txt  about.html  contact.html  css  fonts  images  index.html  js  portfolio.html  sass  services.html
parallels@ubuntu-linux-22-04-02-desktop:~/docker-images$
```

```
parallels@ubuntu-linux-22-04-02-desktop: ~/docker-images
```

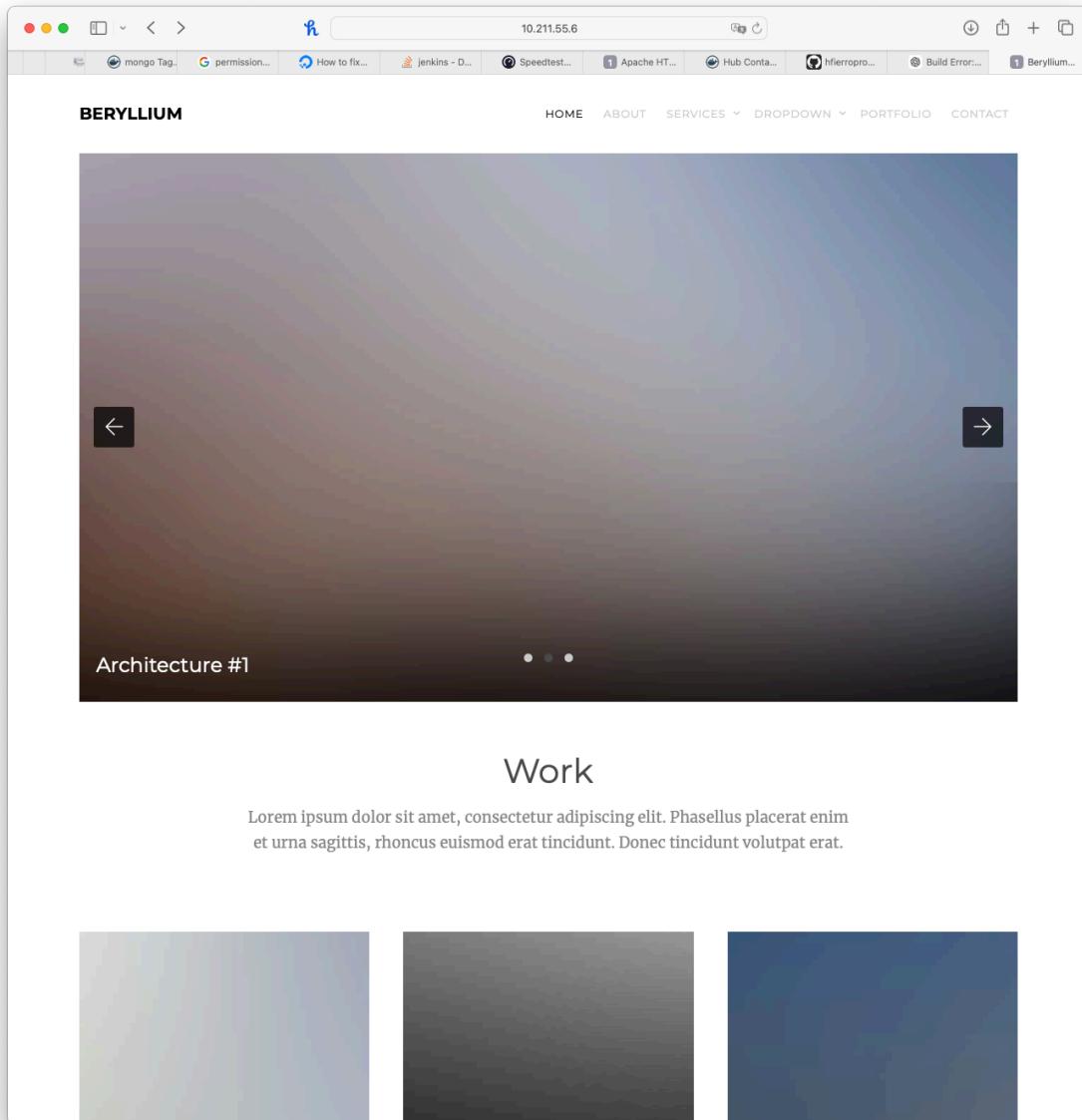
```
GNU nano 6.2 Dockerfile
FROM centos:7
RUN yum install httpd -y
CMD docker-images/beryllium /var/www/html
CMD apachectl -DFOREGROUND
```

```
^G Help      ^O Write Out    ^W Where Is     ^K Cut          ^T Execute      ^C Location      M-U Undo      M-A Set Mark
^X Exit      ^R Read File    ^Y Replace      ^U Paste        ^J Justify      ^I Go To Line    M-B Redo      M-G Copy
```

```
parallels@ubuntu-linux-22-04-02-desktop: ~/docker-images
```

```
docker: Error response from daemon: Conflict. The container name "/apache" is already in use by container "e9806e760868657d96d3f
fd8961aeca4567791a9c45c3d5c50bc469fcfa53e10a". You have to remove (or rename) that container to be able to reuse that name.
See 'docker run --help'.
parallels@ubuntu-linux-22-04-02-desktop:~/docker-images$ docker rm -fv apache
apache
parallels@ubuntu-linux-22-04-02-desktop:~/docker-images$ 
parallels@ubuntu-linux-22-04-02-desktop:~/docker-images$ 
parallels@ubuntu-linux-22-04-02-desktop:~/docker-images$ docker build --tag apache-centos:capache-copy .
[+] Building 0.4s (6/6) FINISHED                                            docker:default
=> [internal] load build definition from Dockerfile                      0.0s
=> => transferring dockerfile: 145B                                       0.0s
=> [internal] load metadata for docker.io/library/centos:7              0.4s
=> [internal] load .dockerignore                                         0.0s
=> => transferring context: 2B                                           0.0s
=> [1/2] FROM docker.io/library/centos:7@sha256:be65f488b7764ad3638f236b7b51b3678369a5124c47b8d32916d6487418ea4 0.0s
=> CACHED [2/2] RUN yum install httpd -y                                0.0s
=> exporting to image                                                 0.0s
=> => exporting layers                                              0.0s
=> => writing Image sha256:9d2c886e50d17163fc45f2ad29fb9eb4f1a06f5f1cdede94816a771e98c5a8e3 0.0s
=> => naming to docker.io/library/apache-centos:capache-copy           0.0s
parallels@ubuntu-linux-22-04-02-desktop:~/docker-images$ docker run -d --name apache -p 80:80 apache-centos:capache-copy
b12bf146fc0cdc2b8ba5ae2db9f50c1b7e2395e7bc7f253a80f04d95e92fbee9
parallels@ubuntu-linux-22-04-02-desktop:~/docker-images$ docker ps
CONTAINER ID IMAGE                COMMAND             CREATED            STATUS              PORTS
NAMES
b12bf146fc6c  apache-centos:capache-copy  "/bin/sh -c 'apachec..."  4 seconds ago   Up 4 seconds   0.0.0.0:80->80/tcp, :::80->80
0/tcp  apache
parallels@ubuntu-linux-22-04-02-desktop:~/docker-images$ 
```

## VERIFICANDO LA CORRECTA IMPLEMENTACIÓN DE BERYLLIUM:



## DESPLEGANDO EN GOOGLE CLOUD:

### HACIENDO LOGIN EN DOCKER:

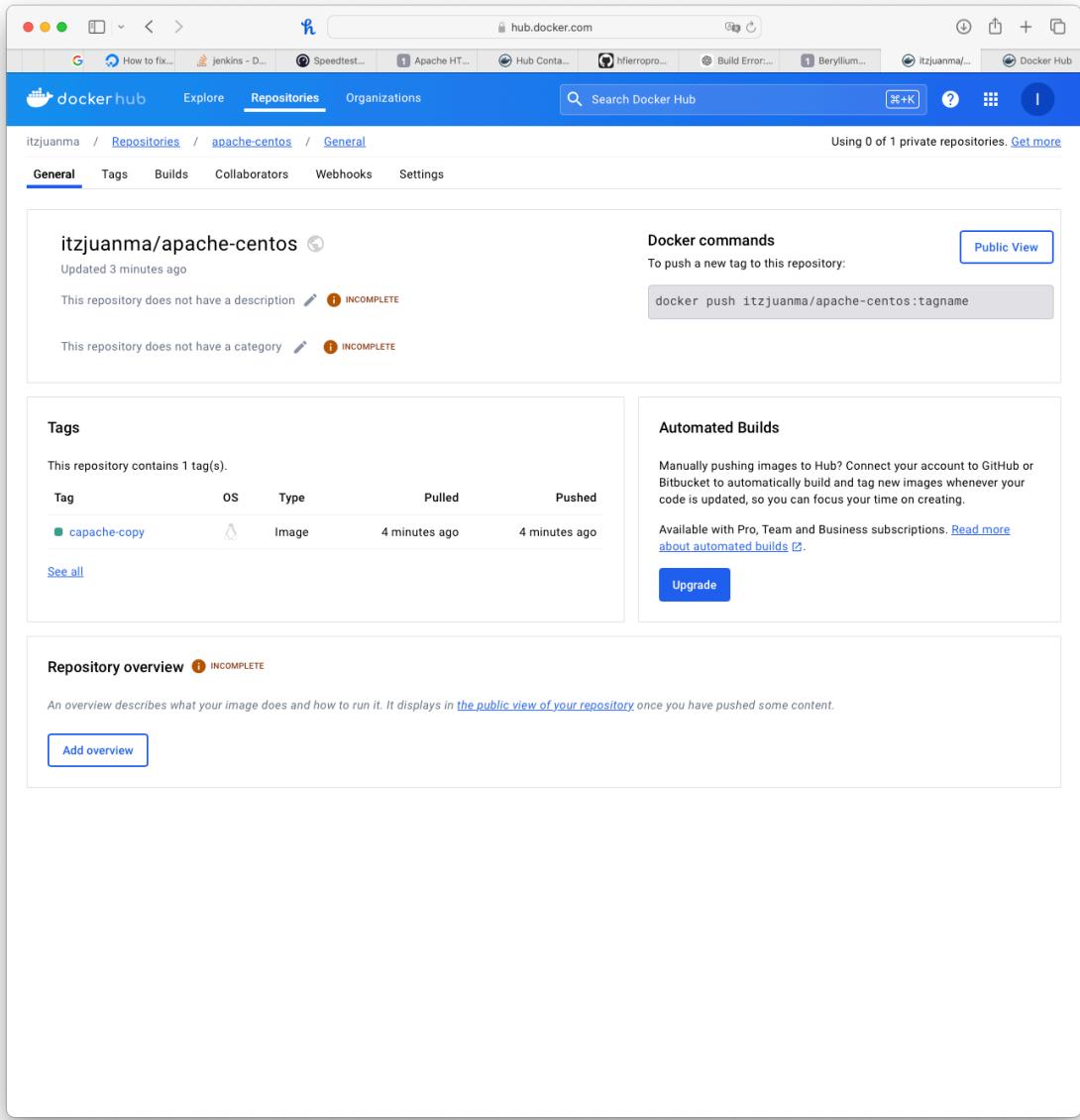
```
parallels@ubuntu-linux-22-04-02-desktop: ~/docker-images
=> [1/3] FROM docker.io/library/centos:7@sha256:be65f488b7764ad3638f236b7b51b3678369a5124c47b8d32916d6487418ea4
=> [internal] load build context
=> => transferring context: 3.11MB
=> [2/3] RUN yum install httpd -y
=> [3/3] COPY docker-images/beryllium /var/www/html
=> exporting to image
=> => exporting layers
=> => writing Image sha256:ca488947c37a1e7285a513035e89e29c25f514adee3dc001685514020e88702d
=> => naming to docker.io/library/apache-centos:capache-copy
parallels@ubuntu-linux-22-04-02-desktop:~/docker-images$ docker run -d --name apache -p 80:80 apache-centos:capache-copy
7d22c51db77b3a7c03cdee8849c84ce58a1ab4a6fa587b49685baf9e5bc15778
parallels@ubuntu-linux-22-04-02-desktop:~/docker-images$ docker ps
CONTAINER ID IMAGE COMMAND CREATED STATUS PORTS
NAMES
7d22c51db77b apache-centos:capache-copy "/bin/sh -c 'apachec..." 3 seconds ago Up 3 seconds 0.0.0.0:80->80/tcp, :::80->8
0/tcp apache
parallels@ubuntu-linux-22-04-02-desktop:~/docker-images$ parallels@ubuntu-linux-22-04-02-desktop:~/docker-images$ parallels@ubuntu-linux-22-04-02-desktop:~/docker-images$ parallels@ubuntu-linux-22-04-02-desktop:~/docker-images$ Docker login -u itzjuanma
bash: Docker: command not found
parallels@ubuntu-linux-22-04-02-desktop:~/docker-images$ docker login -u itzjuanma
Password:
WARNING! Your password will be stored unencrypted in /home/parallels/.docker/config.json.
Configure a credential helper to remove this warning. See
https://docs.docker.com/engine/reference/commandline/login/#credentials-store

Login Succeeded
parallels@ubuntu-linux-22-04-02-desktop:~/docker-images$
```

### SUBIENDO LA IMAGEN CREADA:

```
parallels@ubuntu-linux-22-04-02-desktop: ~/docker-images
7d22c51db77b apache-centos:capache-copy "/bin/sh -c 'apachec..." 3 seconds ago Up 3 seconds 0.0.0.0:80->80/tcp, :::80->8
0/tcp apache
parallels@ubuntu-linux-22-04-02-desktop:~/docker-images$ parallels@ubuntu-linux-22-04-02-desktop:~/docker-images$ parallels@ubuntu-linux-22-04-02-desktop:~/docker-images$ parallels@ubuntu-linux-22-04-02-desktop:~/docker-images$ Docker login -u itzjuanma
bash: Docker: command not found
parallels@ubuntu-linux-22-04-02-desktop:~/docker-images$ docker login -u itzjuanma
Password:
WARNING! Your password will be stored unencrypted in /home/parallels/.docker/config.json.
Configure a credential helper to remove this warning. See
https://docs.docker.com/engine/reference/commandline/login/#credentials-store

Login Succeeded
parallels@ubuntu-linux-22-04-02-desktop:~/docker-images$ dockertag apache-centos:capache-copy itzjuanma/apache-centos:copy
bash: dockertag: command not found
parallels@ubuntu-linux-22-04-02-desktop:~/docker-images$ docker tag apache-centos:capache-copy itzjuanma/apache-centos:copy
parallels@ubuntu-linux-22-04-02-desktop:~/docker-images$ docker push itzjuanma/apache-centos:capache-copy
The push refers to repository [docker.io/itzjuanma/apache-centos]
tag does not exist: itzjuanma/apache-centos:capache-copy
parallels@ubuntu-linux-22-04-02-desktop:~/docker-images$ docker tag apache-centos:capache-copy itzjuanma/apache-centos:capache-copy
parallels@ubuntu-linux-22-04-02-desktop:~/docker-images$ docker push itzjuanma/apache-centos:capache-copy
The push refers to repository [docker.io/itzjuanma/apache-centos]
4c251147f2e6: Pushed
40e103b05906: Pushed
65f23ff12f4d: Mounted from library/centos
capache-copy: digest: sha256:0f4b1fa8bb61bb7e14673b6ea138be785236e9911f1d4699d340e8ce4dbfb976 size: 953
parallels@ubuntu-linux-22-04-02-desktop:~/docker-images$
```



The screenshot shows a Docker Hub repository page for the user `itzjuanma`. The repository name is `apache-centos`, and the tab selected is `General`.

**Repository Information:**

- Name:** itzjuanma/apache-centos
- Last updated:** 3 minutes ago
- Description:** This repository does not have a description.
- Tags:** `apache-copy` (Image, 4 minutes ago, Pulled 4 minutes ago)
- Category:** This repository does not have a category.

**Docker commands:** To push a new tag to this repository, use the command `docker push itzjuanma/apache-centos:tagname`.

**Automated Builds:** Manually pushing images to Hub? Connect your account to GitHub or Bitbucket to automatically build and tag new images whenever your code is updated, so you can focus your time on creating. Available with Pro, Team and Business subscriptions. [Read more about automated builds](#).

**Tags:** This repository contains 1 tag(s). [See all](#)

**Repository overview:** An overview describes what your image does and how to run it. It displays in [the public view of your repository](#) once you have pushed some content. [Add overview](#)

## CREANDO EL REPOSITORIO EN GOOGLE CLOUD:

The screenshot shows the 'Crear repositorio' (Create repository) page in the Google Cloud Artifact Registry. The URL in the browser is [console.cloud.google.com/artifacts/create-repo?project=balanceadores-de-carga1](https://console.cloud.google.com/artifacts/create-repo?project=balanceadores-de-carga1). The page has a sidebar on the left with 'Artifact Registry' and 'Repositories' selected. The main form fields include:

- Nombre \***: docker-url
- Formato**: Docker (selected)
- Modo**: Estándar (selected)
- Tipo de ubicación**: Región (selected)
- Región \***: us-central1 (Iowa) (selected)
- Descripción**: (empty text area)
- Etiquetas**: + AGREGAR UNA ETIQUETA (button)
- Encriptación**: (informational text about encryption)

At the top right, there are 'DESCARTAR' and 'ACTIVAR' buttons. The top navigation bar shows 'Universidad Rafael...' and the 'Google Cloud' logo.

## REALIZANDO LA DESCARGA DESDE DOCKER HUB DE LA IMAGEN CARGADA:

The screenshot shows the Google Cloud Artifact Registry interface. At the top, there is a banner for a free trial with \$221.47 credit left, with 'DESCARTAR' and 'ACTIVAR' buttons. Below the banner, the navigation bar includes 'Google Cloud' and the repository name 'Balanceadores-de-carga1'. The main area is titled 'Artifact Registry' and shows a 'Repositorios' section. A modal window titled 'Activa el análisis de vulnerabilidades' (Enable vulnerability analysis) is open, explaining the service and offering an 'ACTIVAR' button. Below the modal, a table lists a single repository entry: 'docker-url' (Docker, Standard, us-central1 (Iowa)). On the left sidebar, there are sections for 'Notas de versión' (Version notes) and a back arrow. At the bottom, a Cloud Shell terminal window is open, showing the command 'docker pull itzjuanma/apache-centos:capache-copy' being run, which successfully pulls the image.

Nombre	Formato	Tipo	Ubicación	Descripción	Etiquetas	Políticas
docker-url	Docker	Estándar	us-central1 (Iowa)			

```
Welcome to Cloud Shell! Type "help" to get started.  
Your Cloud Platform project in this session is set to balanceadores-de-cargal.  
Use "gcloud config set project [PROJECT_ID]" to change to a different project.  
jmbarillas97@cloudshell:~ (balanceadores-de-carga1)$ docker pull itzjuanma/apache-centos:capache-copy  
capache-copy: Pulling from itzjuanma/apache-centos  
6717b8ec66cd: Pull complete  
805ee3f0dc85: Pull complete  
ec5513bdd16d: Pull complete  
Digest: sha256:0f4bifa8b6bb7e14673b6ea138be785236e9911f1d4699d340e8ce4dbfb976  
Status: Downloaded newer image for itzjuanma/apache-centos:capache-copy  
docker.io/itzjuanma/apache-centos:capache-copy  
jmbarillas97@cloudshell:~ (balanceadores-de-carga1)$
```

## RENOMBRANDO EL CONTENEDOR PARA PODER REALIZAR EL DESPLIEGUE:

The screenshot shows the Google Cloud Platform Artifact Registry interface. A modal window titled "Activa el análisis de vulnerabilidades" (Enable vulnerability analysis) is open, explaining that the registration is not monitored for known vulnerabilities and offering to activate it for \$0.26 per image. Below the modal, a table lists a single repository named "docker-url".

Nombre	Formato	Tipo	Ubicación	Descripción	Etiquetas	Políticas
docker-url	Docker	Estándar	us-central1 (Iowa)			

At the bottom, a Cloud Shell window displays a terminal session where a Docker image is being pulled and tagged.

```
Welcome to Cloud Shell! Type "help" to get started.  
Your Cloud Platform project in this session is set to balanceadores-de-carga1.  
Use "gcloud config set project [PROJECT_ID]" to change to a different project.  
jmbarillas97@cloudshell:~ (balanceadores-de-carga1)$ docker pull itzjuanma/apache-centos:capache-copy  
capache-copy: Pulling from itzjuanna/apache-centos  
6717b8ec66cd: Pull complete  
805ee3f0dc85: Pull complete  
ec5513bdd16d: Pull complete  
Digest: sha256:0f4bifa8b6bb7e14673b6ea138be785236e9911f1d4699d340e8ce4dbfb976  
Status: Downloaded newer image for itzjuanna/apache-centos:capache-copy  
docker.io/itzjuanna/apache-centos:capache-copy  
jmbarillas97@cloudshell:~ (balanceadores-de-carga1)$ docker tag itzjuanma/apache-centos:capache-copy us-central1-docker.pkg.dev/balanceadores-de-carga1/docker-url/apache-centos:v1  
jmbarillas97@cloudshell:~ (balanceadores-de-carga1)$
```

## VERIFICANDO LOS CAMBIOS:

The screenshot shows the Google Cloud Artifact Registry interface. At the top, there's a banner about a free trial with a balance of \$221.47 and 68 days left. Below it, the main navigation bar includes 'Google Cloud' and the repository name 'Balanceadores-de-carga1'. A search bar and various navigation icons are also present.

The left sidebar has two main sections: 'Artifactory Registry' and 'Repositories'. Under 'Repositories', 'Repositories' is selected, and there's a sub-section for 'Configuración'. A modal window titled 'Activa el análisis de vulnerabilidades' (Enable vulnerability analysis) is open, explaining that the registration is not monitored for known vulnerabilities and offering to activate it for \$0.26 per image. It has 'ACTIVAR' and 'MÁS INFORMACIÓN' buttons.

The main content area shows a table of repositories. One row is selected, showing details for a repository named 'docker-url' which is a Docker image located in 'us-central1 (Iowa)'.

At the bottom, there's a terminal window titled '(balanceadores-de-carga1)'. It displays a command-line session where a Docker image was pulled and tagged, and then the Docker images were listed. The output is as follows:

```
ec5513bdd16d: Pull complete
Digest: sha256:0f4bifa8b6b1bb7e14673b6ea138be785236e9911f1d4699d340e8ce4dbfb976
Status: Downloaded newer image for itzjuanma/apache-centos:capache-copy
docker.io/itzjuanma/apache-centos:capache-copy
jmbarillas97@cloudshell:~ (balanceadores-de-carga1)$ docker tag itzjuanma/apache-centos:capache-copy us-central1-docker.pkg.dev/balanceadores-de-carga1/docker-url/apache-centos:v1
jmbarillas97@cloudshell:~ (balanceadores-de-carga1)$ docker images
REPOSITORY                                     TAG          IMAGE ID       CREATED
SIZE
itzjuanma/apache-centos                      capache-copy  ca488947c37a   31 minutes ago
go        427MB
us-central1-docker.pkg.dev/balanceadores-de-carga1/docker-url/apache-centos   v1           ca488947c37a   31 minutes ago
jmbarillas97@cloudshell:~ (balanceadores-de-carga1)$
```

Universidad Rafael...

Estado de la prueba gratuita: Te quedan \$221.47 de crédito y 68 días. Con una cuenta completa, obtendrás acceso ilimitado a todas las funciones de Google Cloud Platform.

DESCARTAR ACTIVAR

Google Cloud Balanceadores-de-carga1 artifact r... Buscar 7

Artifact Registry Repositorios + ACTUALIZAR MOSTRAR PANEL DE INFORMACIÓN

Repositories Configuration

Activa el análisis de vulnerabilidades

Tu registro no se supervisa para detectar vulnerabilidades conocidas. GCP ofrece supervisión automática contra vulnerabilidades para todas las imágenes enviadas o extraídas en los últimos 30 días a un costo de \$0.26 por imagen.

ACTIVAR MÁS INFORMACIÓN

Filtro Ingresar el nombre o el valor de la propiedad

	Nombre ↑	Formato	Tipo	Ubicación	Descripción	Etiquetas	Políticas
<input type="checkbox"/>	docker-url	Docker	Estándar	us-central1 (Iowa)			

Notas de versión

(balanceadores-de-carga1) Abrir editor

```
"us-west3-docker.pkg.dev": "gcloud",
"us-west4-docker.pkg.dev": "gcloud"
}
Adding credentials for: us-central1-docker.pkg.dev
gcloud credential helpers already registered correctly.
jbarillas97@cloudshell:~ (balanceadores-de-carga1)$ docker push us-central1-docker.pkg.dev/balanceadores-de-carga1/docker-url/apache-centos:v1
The push refers to repository [us-central1-docker.pkg.dev/balanceadores-de-carga1/docker-url/apache-centos]
4c251147f2e6: Pushed
40c103b05906: Pushed
65f23ff12f4d: Pushed
v1: digest: sha256:0f4b1fa8b6b1bb7e14673b6ea138be785236e9911f1d4699d340e8ce4dbfb976 size: 953
jbarillas97@cloudshell:~ (balanceadores-de-carga1)$
```

Universidad Rafael...

Estado de la prueba gratuita: Te quedan \$221.47 de crédito y 68 días. Con una cuenta completa, obtendrás acceso ilimitado a todas las funciones de Google Cloud Platform.

DESCARTAR ACTIVAR

Google Cloud Balanceadores-de-carga1 artifact r... Buscar 7 ACTUALIZAR

Artifact Registry Repositorios Configuración

Detalles del repositorio

Formato Docker Tipo Estándar

Mostrar más

Filtro Ingresar el nombre o el valor de la propiedad

	Nombre ↑	Conexión	Fecha de creación	Actualizado
	apache-centos	—	Hace unos instantes	Hace unos instantes

Notas de versión

(balanceadores-de-carga1)

```
"us-west3-docker.pkg.dev": "gcloud",
"us-west4-docker.pkg.dev": "gcloud"
}
Adding credentials for: us-central1-docker.pkg.dev
gcloud credential helpers already registered correctly.
jbarillas97@cloudshell:~ (balanceadores-de-carga1)$ docker push us-central1-docker.pkg.dev/balanceadores-de-carga1/docker-url/apache-centos:v1
The push refers to repository [us-central1-docker.pkg.dev/balanceadores-de-carga1/docker-url/apache-centos]
4c251147f2e6: Pushed
40c103b05906: Pushed
65f23ff12f4d: Pushed
v1: digest: sha256:0f4b1fa8b6b1bb7e14673b6ea138be785236e9911f1d4699d340e8ce4dbfb976 size: 953
jbarillas97@cloudshell:~ (balanceadores-de-carga1)$
```

Universidad Rafael...

Estado de la prueba gratuita: Te quedan \$221.47 de crédito y 68 días. Con una cuenta completa, obtendrás acceso ilimitado a todas las funciones de Google Cloud Platform. [DESCARTAR](#) [ACTIVAR](#)

Google Cloud Balanceadores-de-carga1 artifact r... Buscar 7

Artifact Registry Artifactory 0f4b1fa8b6b1b BORRAR MOSTRAR TODAS LAS VERSIONES

Repositories Configuration

DESCRIPCIÓN GENERAL EXTRAER MANIFIESTO

Formato	Docker
Tipo de medio	application/vnd.docker.distribution.manifest.v2+json
Proyecto	balanceadores-de-carga1
Ubicación	us-central1 (Iowa)
Repositorio	docker-url
Imagen	apache-centos
Resumen	sha256:0f4b1fa8b6b1bb7e14673b6ea138be785236e9911f1d4699d340e8ce4dbfb976
Tamaño virtual	157.4 MB
Creado	16 may 2024 17:07:56
Fecha de creación	16 may 2024 17:41:49
Actualizado	16 may 2024 17:41:49
Etiquetas	v1

Notas de versión

<|

## REALIZANDO EL DESPLIGUE DE LOS CONTENEDORES A TRAVÉS DE CLOUD RUN:

The screenshot shows the 'Create service' page for Cloud Run. At the top, there's a navigation bar with tabs for 'Cloud Run' and 'Crear servicio'. Below the navigation, there's a section about service scaling and a 'Resumen de precios' (Price summary) box.

**Resumen de precios**

Precios de Cloud Run
Nivel gratuito
Primeras 180,000 unidades de CPU virtuales segundo por mes
Primeros 360,000 GiB segundo por mes
2 millones de solicitudes por mes
→ Verificar los detalles de los niveles pagados

**Configurar**

Nombre del servicio \*: apache-centos

Región \*: us-central1 (Iowa)

Autenticación \*

Permitir invocaciones sin autenticar  
Marca esta opción si estás creando una API o un sitio web públicos.

Autenticación obligatoria  
Administra los usuarios autorizados con Cloud IAM.

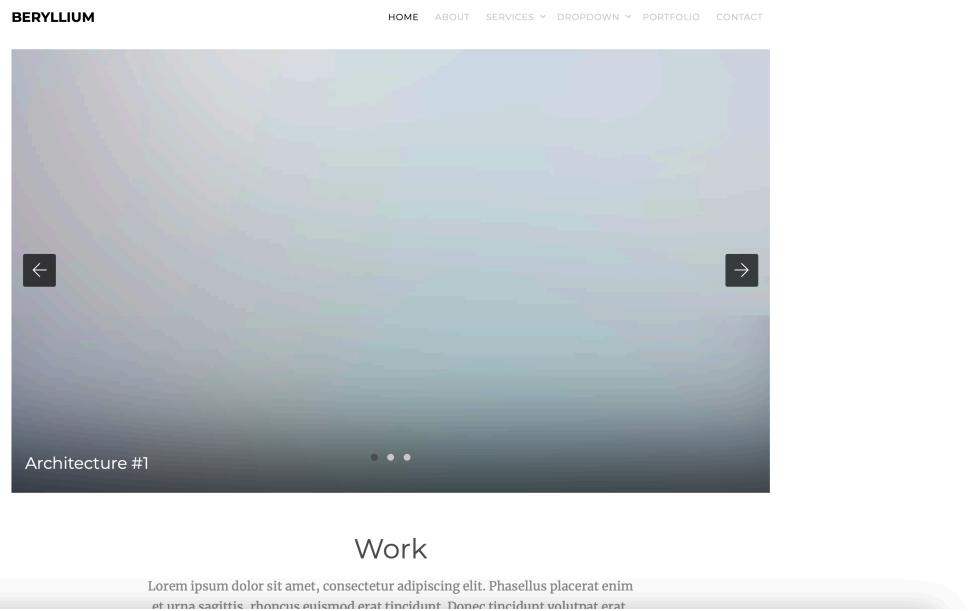
Precios y asignación de CPU ?

Los CPU solo se asignan durante el procesamiento de la solicitud.

**CREAR**   **CANCELAR**

**Se habilitó la API de Cloud Run**

## VERIFICANDO EL DESPLIGUE DEL CONTENEDOR EN GOOGLE CLOUD:



### Work

Et urna sagittis rhoncus quismodarat tincidunt. Donec tincidunt volutpat orat