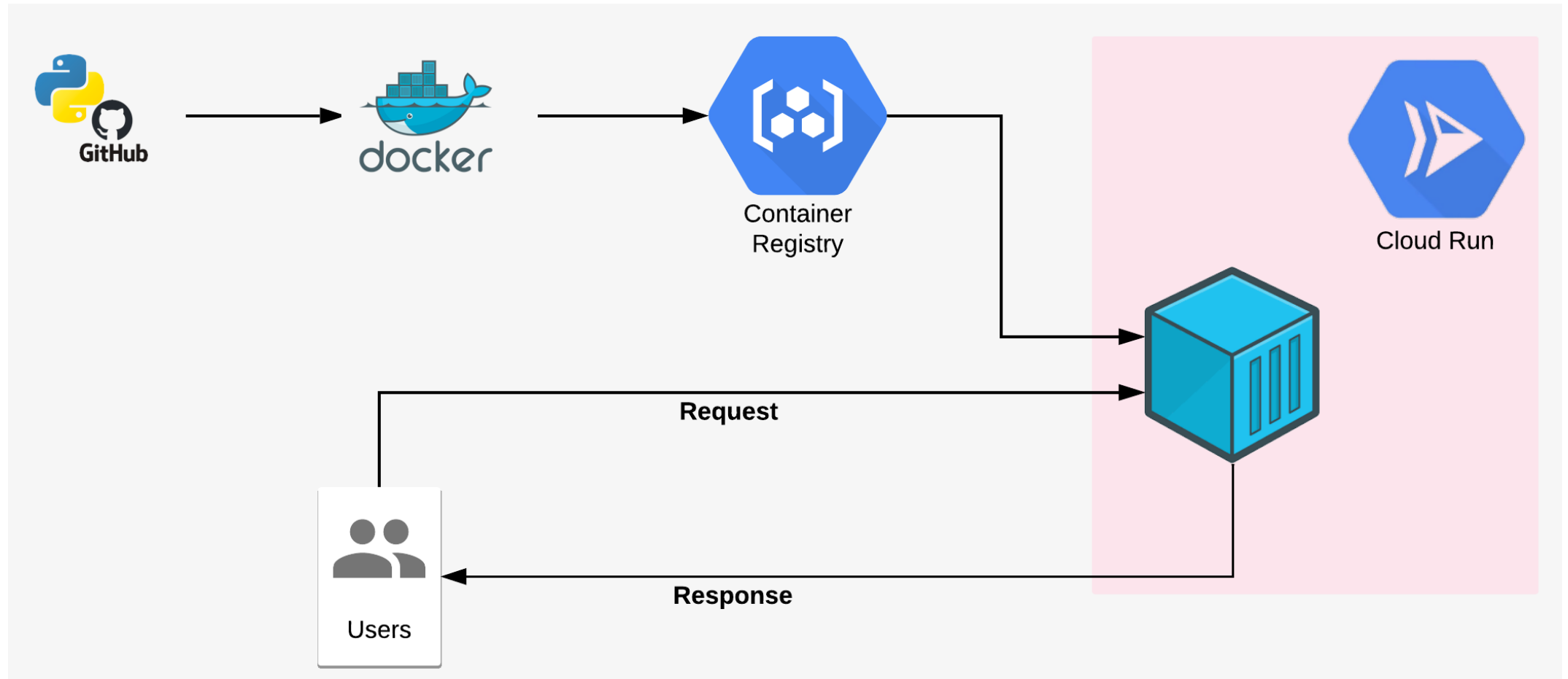


Introducción a Google Cloud Run.

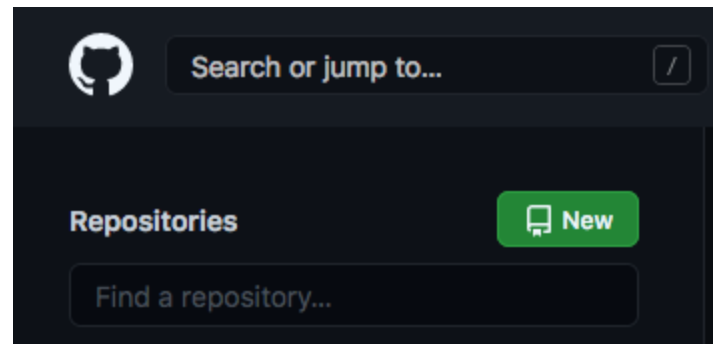
- Para desplegar aplicaciones dockerizadas tenemos varias opciones.
- Las más simples son:
 - Google Cloud Run en Google Cloud
 - Azure Container Instances
 - AWS Fargate

- Vamos a desplegar el API que acabamos de programar.
- Usaremos el código de la carpeta ejemplo_docker_3.

- El proceso que seguiremos se resume en:



- Crearemos un nuevo repositorio en github.



Create a new repository

A repository contains all project files, including the revision history. Already have a project repository elsewhere? [Import a repository](#).

Owner *



fernandodelacalle ▾

Repository name *

/ my_first_api



Great repository names are short and memorable. Need inspiration? How about **stunning-octo-computing-machine**?

Description (optional)



Public

Anyone on the internet can see this repository. You choose who can commit.



Private

You choose who can see and commit to this repository.

Initialize this repository with:

Skip this step if you're importing an existing repository.



Add a README file

This is where you can write a long description for your project. [Learn more](#).




Add .gitignore

Choose which files not to track from a list of templates. [Learn more](#).



Choose a license

A license tells others what they can and can't do with your code. [Learn more](#).

This will set  **main** as the default branch. Change the default name in your [settings](#).

Create repository

- En él pondremos todo el código de nuestra aplicación.
- Clona el repo desde gitkraken.
- Añade los ficheros de la carpeta ejemplo_docker_3..


- Haz un commit de los cambios y súbelo al repositorio de origen.

The screenshot shows the GitHub interface for the repository 'fernandodelacalle / my_first_api'. The 'Code' tab is selected. At the top, there are navigation links: Code, Issues, Pull requests, Actions, Projects, Wiki, Security, Insights, and Settings. Below these, there are buttons for 'main' (selected), '1 branch', and '0 tags'. To the right are buttons for 'Go to file', 'Add file', and 'Code' (with a download icon). The main content area shows a commit history table with the following entries:

Commit Message	Commit Hash	Time Ago	Commits
Fernando de la Calle Silos api example	0e7df01	1 minute ago	2 commits
src	api example	1 minute ago	
Dockerfile	api example	1 minute ago	
README.md	Initial commit	5 minutes ago	
requirements.txt	api example	1 minute ago	


Below the table, the 'README.md' file is displayed, showing the text 'my_first_api'.

- Creamos un proyecto en google cloud

 Google Cloud Platform


New Project

Project name *

My Project 27799 


Project ID: ninth-terminal-310708. It cannot be changed later. [EDIT](#)

Billing account *

My Billing Account 

Any charges for this project will be billed to the account you select here.

Location *

 No organization [BROWSE](#)

Parent organization or folder

CREATE

CANCEL

- Abrimos un cloud shell
- Comprobamos que el sheel está en proyecto que acabamos de crear.

```
Welcome to Cloud Shell! Type "help" to get started.  
Your Cloud Platform project in this session is set to my-first-api-310708.  
Use "gcloud config set project [PROJECT_ID]" to change to a different project.  
fernando_decalle@cloudshell:~ (my-first-api-310708)$  
fernando_decalle@cloudshell:~ (my-first-api-310708)$  
fernando_decalle@cloudshell:~ (my-first-api-310708)$
```

- Clonamos el repo que acabamos de crear:

```
git clone https://github.com/----/my_first_api.git  
cd my_first_api
```

- Tenemos que construir la imagen y subirla al registry de google.
- Para ello primero activamos el registry en nuestro proyecto



Container Registry

Google Container Registry provides secure, private Docker repository storage on Google Cloud Platform. You can use gcloud to [push images to your registry](#) [↗], then you can pull images using an HTTP endpoint from any machine, whether it's a Google Compute Engine instance or your own hardware. [Learn more](#)

 Container Registry API not enabled

[Enable Container Registry API](#)

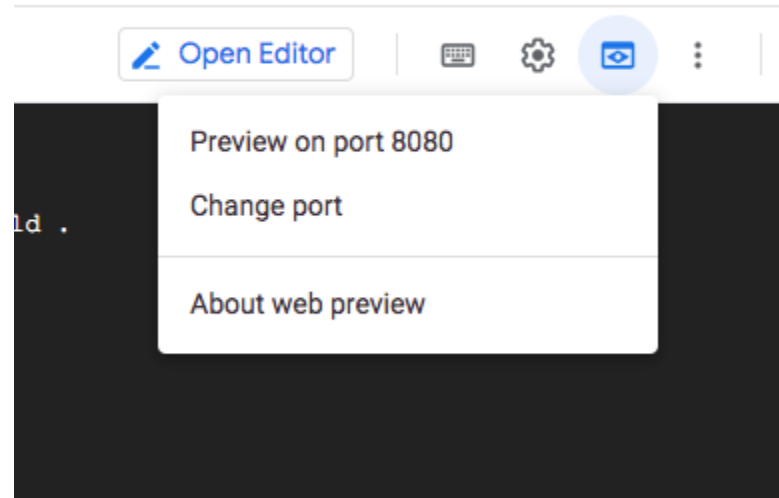
- El nombre de nuestra imagen será: gcr.io/PROJECT-ID/my-first-api
- Construimos la imagen con:

```
docker build -t gcr.io/PROJECT-ID/my-first-api .
```

- Podemos realizar una prueba ejecutando un contenedor con:

```
docker run -p 8080:8080 gcr.io/PROJECT-ID/my-first-api
```

- Podemos ver si funciona usando web preview:



- Subimos la imagen al registry con:

```
docker push gcr.io/PROJECT-ID/my-first-api
```

- Tendrás que ver en tu registry algo como esto:

my-first-api

Filter

All hostnames

Name

Hostname

Visibility

my-first-api

gcr.io

Private

my-first-api

gcr.io / my-first-api-310708 / my-first-api 

Filter by name or tag

?

Columns

Name

Tags

Created

Uploaded

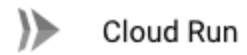
d2089c6811bd

latest


3 minutes ago

Just now


- Ahora vamos a desplegar la imagen en cloud run.
- Para ello nos dirigimos en la interfaz a:











- Crearemos un nuevo servicio:

 Cloud Run | Services | [+ CREATE SERVICE](#) | [MANAGE CUSTOM DOMAINS](#) | [COPY](#) | [DELETE](#)

Each Cloud Run service has a unique endpoint and autoscales deployed containers. [Learn more](#)

 Clicking "Create service" will enable the Cloud Run API.

 **Filter** Filter services  

<input type="checkbox"/>	 Name 	Req/sec 	Region	Authentication 	Ingress 	Last deployed	Deployed by
No rows to display							

- Configuramos de la siguiente manera:

1 Service settings

A service exposes a unique endpoint and automatically scales the underlying infrastructure to handle incoming requests. Deployment platform and service name cannot be changed.

Service name *

my-first-api

Deployment platform ?

☒ Cloud Run (fully managed)

Region *

europa-west1 (Belgium)

[How to pick a region?](#)

☐ Cloud Run for Anthos

NEXT

- Seleccionamos la imagen que acabamos de crear:

2

Configure the service's first revision

A service can have multiple revisions. The configurations of each revision are immutable.

☒ Deploy one revision from an existing container image

Container image URL *

SELECT

E.g. `us-docker.pkg.dev/cloudrun/container/hello`

Should listen for HTTP requests on \$PORT and not rely on local state. [How to build a container?](#)

☐ Continuously deploy new revisions from a source repository

Advanced settings



NEXT

CONTAINER REGISTRY

ARTIFACT REGISTRY

Project: my-first-api-310708 [CHANGE](#)

▶ Demo containers

▼ gcr.io/my-first-api-310708/my-first-api

d2089c6811

latest

2 minutes ago

SELECT

CANCEL

- Seleccionamos por último las siguientes opciones:

Configure how this service is triggered

A service can be invoked directly or via events. Click "Add Eventarc Trigger" to create a new event-based trigger. [Learn more](#)

Ingress ?

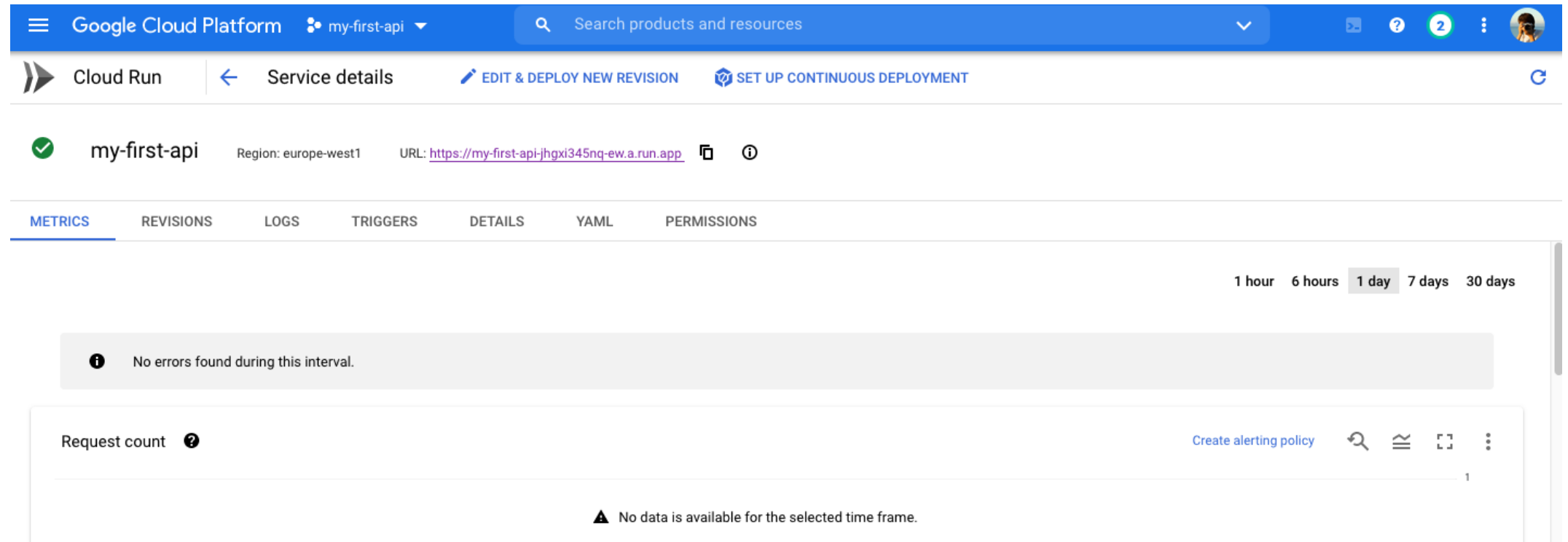
- ☒ Allow all traffic
- ☐ Allow internal traffic and traffic from Cloud Load Balancing
- ☐ Allow internal traffic only

Authentication * ?

- ☒ Allow unauthenticated invocations
Check this if you are creating a public API or website.
- ☐ Require authentication
Manage authorized users with Cloud IAM.

[+ ADD EVENTARC TRIGGER](#)

- Una vez desplegado veremos:



- Podemos ver nuestra API en la web url superior.

- Este proceso lo podemos realizar desde la linea de comandos con:

```
gcloud run deploy my-api --image gcr.io/PROJECT-ID/my-first-api:0.0.2 \
    --allow-unauthenticated \
    --platform managed \
    --region europe-west1 \
    --memory 2G \
```

- Si realizamos algún cambio es importante completar los tags para poder volver a versiones anteriores.
- Realicemos algún cambio en el código en nuestro ordenador.
- Subimos los cambios usando git kraken.

- Desde el cloud shell:
 - Traemos los nuevos cambios:

```
git pull origin main
```

- Construimos la imagen:

```
docker build -t gcr.io/my-first-api-310708/my-first-api:0.0.2 .
```

- Subimos la imagen al registry:

```
docker push gcr.io/my-first-api-310708/my-first-api:0.0.2
```

- Desplegamos desde línea de comandos:

```
gcloud run deploy my-dash --image gcr.io/my-first-api-310708/my-first-api:0.0.2 \
                                --allow-unauthenticated \
                                --platform managed \
                                --region europe-west1 \
                                --memory 2G
```

Ejercicio

- Despliega tu aplicación dash.
- Para ello realiza los siguientes pasos:
 - Usa el repo con el código de la app.
 - Desde la consola de google cloud:
 - Clona el repo.
 - Construye una nueva imagen y subela al registry.
 - Genera el nuevo servicio en cloud run.
 - Comprueba que puedes acceder a la página web.