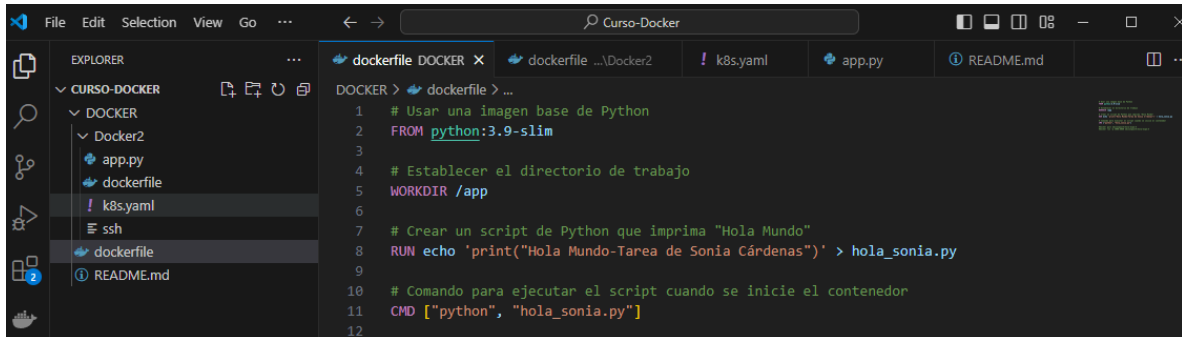


Tarea 4

Sonia Cárdenas Delgado

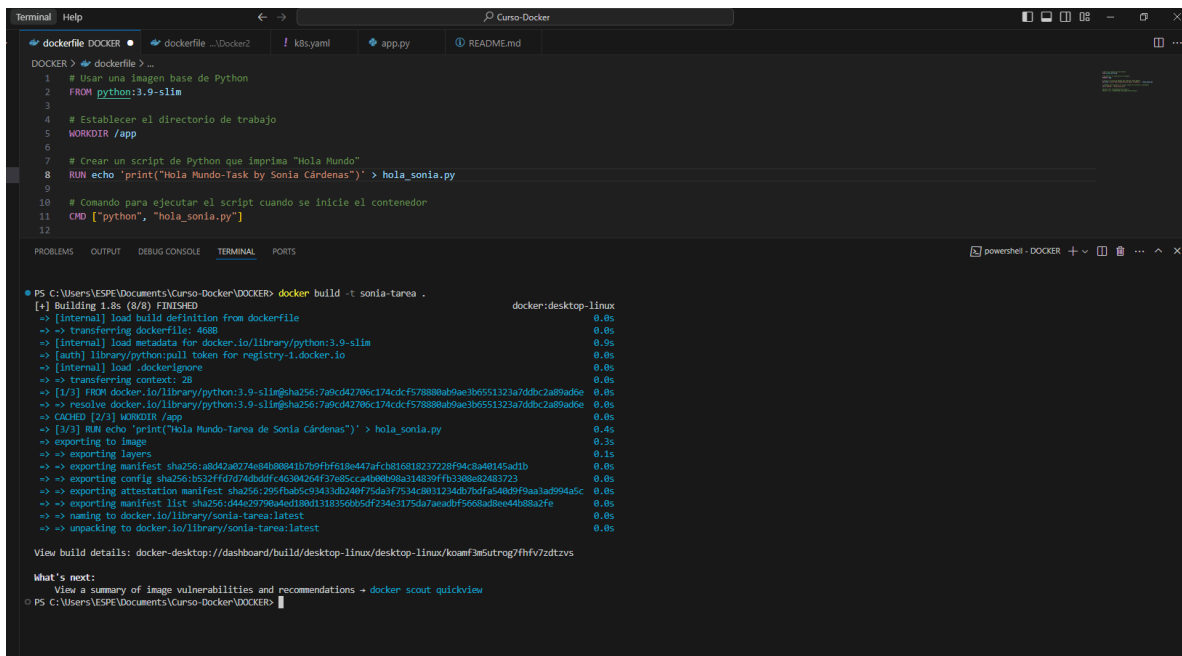
- Despliegue un aplicativo END to END en Kubernetes

Dockerfile que ejecuta el script de Python para desplegar un saludo:



```
1 # Usar una imagen base de Python
2 FROM python:3.9-slim
3
4 # Establecer el directorio de trabajo
5 WORKDIR /app
6
7 # Crear un script de Python que imprima "Hola Mundo"
8 RUN echo "print('Hola Mundo-Tarea de Sonia Cárdenas') > hola_sonia.py"
9
10 # Comando para ejecutar el script cuando se inicie el contenedor
11 CMD ["python", "hola_sonia.py"]
12
```

Construcción de la imagen del Dockerfile



```
PS C:\Users\VESPE\Documents\Curso-Docker\DOCKER> docker build -t sonia-tarea .
[+] Building 1.8s (8/8) FINISHED
=> [Internal] load build definition from dockerfile 0.0s
=> [Internal] load build definition from dockerfile 0.0s
=> [Internal] load metadata for docker.io/library/python:3.9-slim 0.9s
=> [auth] library/python:pull token for registry-1.docker.io 0.0s
=> [Internal] load .dockerignore 0.0s
=> [Internal] transferring context: 2B 0.0s
=> [1/3] FROM docker.io/library/python:3.9-slim@sha256:7a9cd42706c174cdc578880ab9ae3b6551323a7dd8c2a89ade 0.0s
=> resolve docker.io/library/python:3.9-slim@sha256:7a9cd42706c174cdc578880ab9ae3b6551323a7dd8c2a89ade 0.0s
=> CACHED [2/3] WORKDIR /app 0.0s
=> [3/3] RUN echo "print('Hola Mundo-Tarea de Sonia Cárdenas') > hola_sonia.py 0.4s
=> exporting to image 0.3s
=> exporting layers 0.1s
=> exporting manifest sha256:a8d4a0274e84b80841b7b9fbf18e447afcb816818237228f94c8a48145ad1b 0.0s
=> exporting config sha256:b532fd7d74dbddfc46384264f37e85c4ab08b98a314839fb338ae2483723 0.0s
=> exporting attestation manifest sha256:295f0a8c5e934330248f78da3f734e8031234db7bdf4c0a8b9fa3a8994dc 0.0s
=> exporting manifest list sha256:644c9799a4ed180d1318356b5df234c175da7aeadh5668ad8ae44b8a2fe 0.0s
=> naming to docker.io/library/sonia-tarea:latest 0.0s
=> unpacking to docker.io/library/sonia-tarea:latest 0.0s

View build details: docker-desktop://dashboard/build/desktop-linux/desktop-linux/koanf3aSutreg7fhfv7zdtzvs

What's next:
View a summary of image vulnerabilities and recommendations + docker scout quickview
PS C:\Users\VESPE\Documents\Curso-Docker\DOCKER>
```

Ejecutando el contenedor en el puerto 3000

```
PS C:\Users\ESPE\Documents\Curso-Docker\DOCKER> docker build -t sonia-tarea .
[+] Building 1.8s (8/8) FINISHED
=> [internal] load build definition from dockerfile
=> => transferring dockerfile: 468B
=> [internal] load metadata for docker.io/library/python:3.9-slim
=> [auth] library/python:pull token for registry-1.docker.io
=> [internal] load .dockerignore
=> => transferring context: 2B
PS C:\Users\ESPE\Documents\Curso-Docker\DOCKER> docker run -p 3000:3000 sonia-tarea
PS C:\Users\ESPE\Documents\Curso-Docker\DOCKER> docker run -p 3000:3000 sonia-tarea
Hola Mundo-Tarea de Sonia Cárdenas
PS C:\Users\ESPE\Documents\Curso-Docker\DOCKER> docker run -p 3000:3000 sonia-tarea
PS C:\Users\ESPE\Documents\Curso-Docker\DOCKER> docker run -p 3000:3000 sonia-tarea
Hola Mundo-Tarea de Sonia Cárdenas
PS C:\Users\ESPE\Documents\Curso-Docker\DOCKER> |
```

Creando la segunda versión de la imagen del Dockerfile

```
PS C:\Users\ESPE\Documents\Curso-Docker\DOCKER> docker build -t sonia-tarea:1 .
[+] Building 0.9s (7/7) FINISHED
=> [internal] load build definition from dockerfile
=> => transferring dockerfile: 468B
=> [internal] load metadata for docker.io/library/python:3.9-slim
=> [internal] load .dockerignore
=> => transferring context: 2B
=> [1/3] FROM docker.io/library/python:3.9-slim@sha256:7a9cd42706c174cdc5f7888ab9ae3b6551323a7ddbc2a89ad6e5b20a28fbfbc
=> => resolve docker.io/library/python:3.9-slim@sha256:7a9cd42706c174cdc5f7888ab9ae3b6551323a7ddbc2a89ad6e5b20a28fbfbc
=> CACHED [2/3] WORKDIR /app
=> CACHED [3/3] RUN echo 'print("Hola Mundo-Tarea de Sonia Cárdenas")' > hola_sonia.py
=> => exporting layers
=> => exporting manifest sha256:a8d42a0274e84b80841b7b9fbf618e447afcb816818237228f94c8a40145ad1b
=> => exporting config sha256:b532ff07d74dbddfc46384264f37e85cca4b00b98a314839ffb3388e82483723
=> => exporting attestation manifest sha256:30838e400b7425e22339a515fd6901ea6465172907137066b772e3c27a77566
=> => exporting manifest list sha256:5692a5a01d2abf36e2b384c276cdf62c1ed8eb583229ffc6093644e412b3533
=> => naming to docker.io/library/sonia-tarea:1
=> => unpacking to docker.io/library/sonia-tarea:1


View build details: docker-desktop://dashboard/build/desktop-linux/desktop-linux/rjzqr21f2pf3ekgatb4hyna6

What's next:
View a summary of image vulnerabilities and recommendations + docker scout quickview
PS C:\Users\ESPE\Documents\Curso-Docker\DOCKER> |
```







Imágenes creadas visualizadas desde el Docker desktop

<input type="checkbox"/>	docker/desktop-storage-provisioner	v2.0	<input type="radio"/>	4 years ago	59.16 MB	▶	:	<input type="checkbox"/>	115d77efe6e2
<input type="checkbox"/>	sonia-tarea	latest	<input checked="" type="radio"/>	17 minutes ag	190.06 MB	▶	:	<input type="checkbox"/>	d44e29790a4e
<input type="checkbox"/>	sonia-tarea	1	<input type="radio"/>	17 minutes ag	190.06 MB	▶	:	<input type="checkbox"/>	5692a5a01d2a

Creación de un repositorio público para compartir

 **dockerhub**

[Explore](#) [Repositories](#) [Organizations](#) [Usage](#)


     

[Repositories](#) / [Create](#) Using 0 of 1 private repositories.

Create repository

Namespace
secardenas

Repository Name *
microservicio-sonia




Short description


Microservicio para compartir imagen

A short description to identify your repository. If the repository is public, this description is used to index your content on Docker Hub and in search engines, and is visible to users in search results.

Visibility

Using 0 of 1 private repositories. [Get more](#)

☒ **Public** 
Appears in Docker Hub search results

☐ **Private** 
Only visible to you

Cancel

Create

Pushing images

You can push a new image to this repository using the CLI:

```
docker tag local-image:tagname new-repo:tagname
docker push new-repo:tagname
```

Make sure to replace `tagname` with your desired image repository tag.

Vinculación de la imagen con el repositorio creado

```
PS C:\Users\ESPE\Documents\Curso-Docker\DOCKER> docker tag sonia-tarea secardenas/microservicio-sonia
PS C:\Users\ESPE\Documents\Curso-Docker\DOCKER> docker push secardenas/microservicio-sonia
Using default tag: latest
The push refers to repository [docker.io/secardenas/microservicio-sonia]
ad7cbd5b4789: Layer already exists
34edf2059f51: Pushed
1f1bf203cea0: Layer already exists
99b8d55c8acd: Layer already exists
151089ffef3f: Layer already exists
a480a496ba95: Layer already exists
277f520eee4a: Layer already exists
latest: digest: sha256:d44e29790a4ed180d1318356bb5df234e3175da7eadbf5668ad8ee44b88a2fe size: 856
PS C:\Users\ESPE\Documents\Curso-Docker\DOCKER>
```

[Explore](#)
[Repositories](#)
[Organizations](#)
[Usage](#)

[Create repository](#)

secardenas / **microservicio-sonia**
Contains: Image • Last pushed: 1 minute ago

☆ 0
↓ 0
Public
Scout inactive

secardenas / **hola-microservicio**
Contains: Image • Last pushed: 13 days ago

☆ 0
↓ 3
Public
Scout active

secardenas / **hola-espe**
Contains: Image • Last pushed: 13 days ago

☆ 0
↓ 9
Public
Scout inactive

[Explore](#)
[Repositories](#)
[Organizations](#)
[Usage](#)

secardenas / [Repositories](#) / [microservicio-sonia](#) / [General](#)
Using 0 of 1 private repositories.

[General](#)
[Tags](#)
[Builds](#)
[Collaborators](#)
[Webhooks](#)
[Settings](#)

secardenas/microservicio-sonia

Last pushed 2 minutes ago

Microservicio para compartir imagen

This repository does not have a category

INCOMPLETE

Docker commands

To push a new tag to this repository:

```
docker push secardenas/microservicio-sonia:tagname
```

Public View

Tags

This repository contains 1 tag(s).

Tag	OS	Type	Pulled	Pushed
latest		Image	2 minutes ago	2 minutes ago

[See all](#)

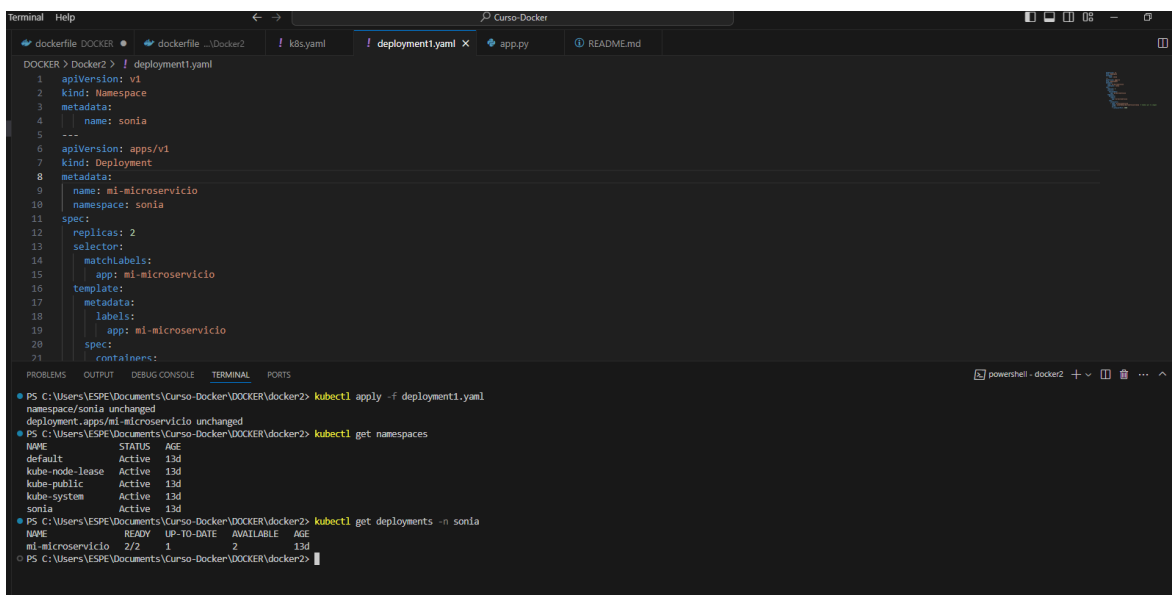
Automated Builds

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](#)

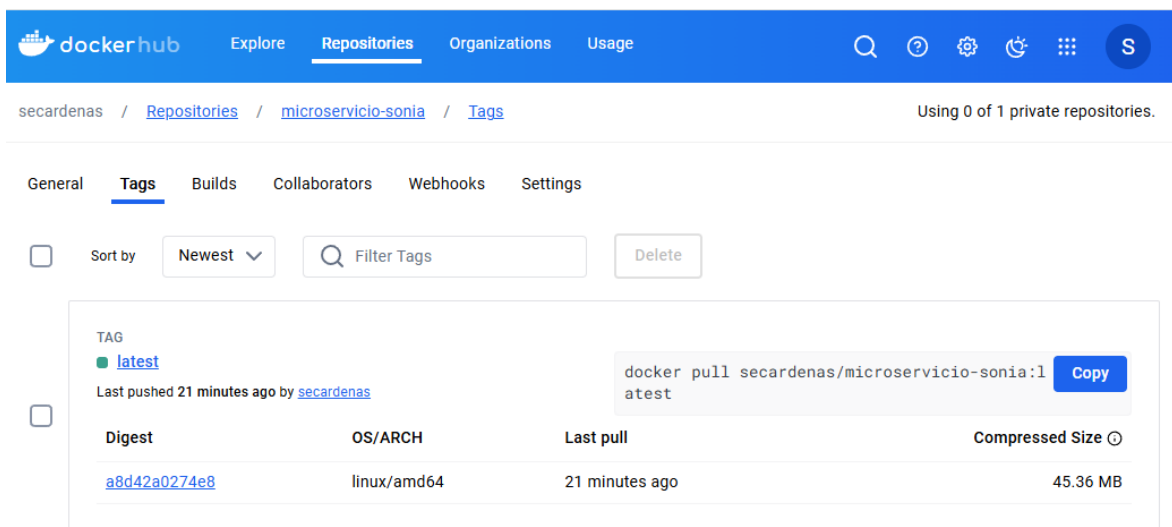
Upgrade

Levantando servicios en Kubernetes para que puedan estar disponibles en producción



```
Terminal Help
Curso-Docker
dockerfile DOCKER • dockerfile _1Docker2 ! k8s.yaml ! deployment1.yaml x app.py README.md
DOCKER > Docker2 > ! deployment1.yaml
1  apiVersion: v1
2  kind: Namespace
3  metadata:
4    name: sonia
5  ---
6  apiVersion: apps/v1
7  kind: Deployment
8  metadata:
9    name: mi-microservicio
10   namespace: sonia
11   spec:
12     replicas: 2
13     selector:
14       matchLabels:
15         app: mi-microservicio
16     template:
17       metadata:
18         labels:
19           app: mi-microservicio
20       spec:
21         containers:

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS
PS C:\Users\ESPE\Documents\Curso-Docker\DOCKER\docker2> kubectl apply -f deployment1.yaml
namespace/sonia unchanged
deployment.apps/mi-microservicio unchanged
PS C:\Users\ESPE\Documents\Curso-Docker\DOCKER\docker2> kubectl get namespaces
NAME STATUS AGE
default Active 13d
kube-node-lease Active 13d
kube-public Active 13d
kube-system Active 13d
sonia Active 13d
PS C:\Users\ESPE\Documents\Curso-Docker\DOCKER\docker2> kubectl get deployments -n sonia
NAME READY UP-TO-DATE AVAILABLE AGE
mi-microservicio 2/2 1 2 13d
PS C:\Users\ESPE\Documents\Curso-Docker\DOCKER\docker2>
```



dockerhub Explore Repositories Organizations Usage

secardenas / [Repositories](#) / [microservicio-sonia](#) / [Tags](#) Using 0 of 1 private repositories.

General Tags Builds Collaborators Webhooks Settings

☐ Sort by **Newest**

TAG

☒ [latest](#)

Last pushed 21 minutes ago by [secardenas](#)

```
docker pull secardenas/microservicio-sonia:latest
```

Digest	OS/ARCH	Last pull	Compressed Size
a8d42a0274e8	linux/amd64	21 minutes ago	45.36 MB

sonia

mi-microservicio

Deployment: mi-microservicio

Metrics

Displaying metrics from Kubernetes Metrics Server

Properties

Created 13d 9h 9m ago 2024-10-20T11:13:01-05:00

Name mi-microservicio

Namespace sonia

Annotations 2 Annotations

Replicas 10 desired, 5 updated, 13 total, 8 available, 5 unavailable

Selector app=mi-microservicio

Strategy Type RollingUpdate

Conditions Available Progressing

Tolerations 0

Deploy Revisions

#	Summary	Pods	Age
3		0/5	23m
2		8/8	13d
1		0/0	13d

Terminal

Pod mi-microservicio-787bdfb456-4f5t5

Deployment mi-microservicio

Displaying logs from Namespace: sonia for Deployment: mi-microservicio. Logs from 2/11/2024, 18:49:05

uebug mode: off

WARNING: This is a development server. Do not use it in a production deployment. Use a production WSGI server instead.

- Running on all addresses (0.0.0.0)
- Running on http://127.0.0.1:5000
- Running on http://10.1.0.64:5000

Press CTRL+C to quit

Serving Flask app 'app'

Debug mode: off

WARNING: This is a development server. Do not use it in a production deployment. Use a production WSGI server instead.

- Running on all addresses (0.0.0.0)
- Running on http://127.0.0.1:5000
- Running on http://10.1.0.65:5000

Press CTRL+C to quit

Visualizar la ejecución de uno de los pods.

localhost54227

localhost54227

Hola Mundo

Pod: mi-microservicio-787bdfb456-kpvr

Namespace sonia

Displaying metrics from Kubernetes Metrics Server

Status running, ready

Image secardenas/hola-microservicio:1

ImagePullPolicy Always

Ports 5000/TCP Stop/Remove

Environment

Mounts /var/run/secrets/kubernetes.io/serviceaccount from kube-api-access-nwaf7 (ro)

Requests CPU: —, Memory: —

Limits CPU: —, Memory: —

Vulnerabilities

Events

Summary	Count	Age
Created container mi-microservicio	1	5m08s
Started container mi-microservicio	1	5m08s
Successfully pulled image "secardenas/hola-microservicio:1" in 647ms (6.344s li	1	5m09s
Pulling image "secardenas/hola-microservicio:1"	1	6m5s
Successfully assigned sonia/mi-microservicio-787bdfb456-kpvr to docker-desk	0	6m7s

Pods

Deployments

Daemon Sets

Stateful Sets

Replica Sets

Replication Controllers

Jobs

Press CTRL+C to quit

Serving Flask app 'app'

Debug mode: off

WARNING: This is a development server. Do not use it in a production deployment. Use a production WSGI server instead.

- Running on all addresses (0.0.0.0)
- Running on http://127.0.0.1:5000
- Running on http://10.1.0.65:5000

Press CTRL+C to quit

127.0.0.1 - - [01/Nov/2024 01:21:10] "GET / HTTP/1.1" 200 -

127.0.0.1 - - [01/Nov/2024 01:21:10] "GET /favicon.ico HTTP/1.1" 404 -