

What is Google Cloud Platform?

Who uses it?

Google Cloud Platform products

Computing

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Let's try it!

Cloud Computing

Working with Google Cloud

Carlos Sánchez Páez

14th March 2019

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What is Google Cloud Platform?

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Let's try it!

- Set of Google's computing resources.

What is Google Cloud Platform?

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Let's try it!

- Set of Google's computing resources.
- They are internally used by Google for their products.

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Let's try it!

- Set of Google's computing resources.
- They are internally used by Google for their products.
- Number 3 in the public cloud market (behind AWS and Azure).

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Let's try it!

- Set of Google's computing resources.
- They are internally used by Google for their products.
- Number 3 in the public cloud market (behind AWS and Azure).
- Offers IaaS, PaaS, SaaS over more than 50 products.

Main advantages

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Let's try it!

- You can freely choose the resources for your Virtual Machine or use a template.

Main advantages

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Let's try it!

- You can freely choose the resources for your Virtual Machine or use a template.
- Lots of interactive tutorials.

Main advantages

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Let's try it!

- You can freely choose the resources for your Virtual Machine or use a template.
- Lots of interactive tutorials.
- Project Control Panel.

Main advantages

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- You can freely choose the resources for your Virtual Machine or use a template.
- Lots of interactive tutorials.
- Project Control Panel.
- Android App.

Main advantages

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- You can freely choose the resources for your Virtual Machine or use a template.
- Lots of interactive tutorials.
- Project Control Panel.
- Android App.
- Online terminal or CLI available.

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The
New York
Times



More than 4 million paying customers (February 2018).

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Google Cloud Platform products

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Computing

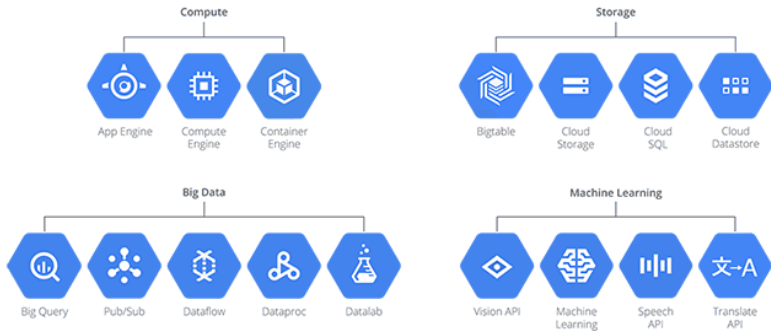
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Google Cloud Platform



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GCP Computing products

What is Google Cloud Platform?

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- App Engine: scalable apps in a serverless platform (PaaS).

GCP Computing products

What is Google Cloud Platform?

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Let's try it!

- App Engine: scalable apps in a serverless platform (PaaS).
- Compute Engine: scalable virtual machines (IaaS).

GCP Computing products

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Let's try it!

- App Engine: scalable apps in a serverless platform (PaaS).
- Compute Engine: scalable virtual machines (IaaS).
- Kubernetes: run containers (Docker).

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GCP Networking products

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- Cloud Armor: protection against DoS attacks.

GCP Networking products

What is Google Cloud Platform?

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- Cloud Armor: protection against DoS attacks.
- Cloud VPN

GCP Networking products

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- Cloud Armor: protection against DoS attacks.
- Cloud VPN
- Network Service Tiers: optimize network for performance or cost.

GCP Networking products

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Let's try it!

- Cloud Armor: protection against DoS attacks.
- Cloud VPN
- Network Service Tiers: optimize network for performance or cost.
- Load balancing: intelligent scaling through multiple regions.

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GCP Big Data products

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- Dataflow: batch data processing.

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- Dataflow: batch data processing.
- Genomics (for bioinformatics)

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Let's try it!

- Dataflow: batch data processing.
- Genomics (for bioinformatics)
- Dataprep: clean data for analysis.

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GCP Machine Learning products

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- Vision API: recognise objects in an image.

GCP Machine Learning products

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Let's try it!

- Vision API: recognise objects in an image.
- Speech API: voice to text.

GCP Machine Learning products

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Let's try it!

- Vision API: recognise objects in an image.
- Speech API: voice to text.
- Natural Language API: extract information from a text (sentiment, importance in the whole text).

GCP Machine Learning products

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Let's try it!

- Vision API: recognise objects in an image.
- Speech API: voice to text.
- Natural Language API: extract information from a text (sentiment, importance in the whole text).
- Translate API: Google Translate.

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Source code

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```
import webapp2
class MainPage(webapp2.RequestHandler):
    def get(self):
        self.response.headers
            ['Content-Type'] = 'text/plain'
        self.response.write('Hello world!')

app = webapp2.WSGIApplication([
    ('/', MainPage),
], debug=True)
```

Step 1: creating the project

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Let's try it!

Google Cloud Platform

cc-test


App Engine

Tu primera aplicación con Python

1 Selecciona una ubicación

¿En qué región te gustaría distribuir tu aplicación?

Tu aplicación se distribuirá desde la región seleccionada. Cualquier persona puede usar la aplicación, pero los usuarios que estén más cerca tendrán una menor latencia. La región del proyecto no se puede cambiar más adelante.



Google Map data ©2019 Terms of Use

Selecciona una región

us-central

Siguiente

Control panel

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Let's try it!

The screenshot shows the Google Cloud Platform console interface for a project named 'cc-test'. The top navigation bar includes the Google Cloud Platform logo, the project name, and a search icon. Below the navigation bar, the main content area is divided into several sections:

- PANEL DE CONTROL**: This section contains three main cards:
 - Información del proyecto**: Displays project details such as 'Nombre de proyecto' (cc-test), 'ID del proyecto' (cc-test-234210), and 'Número del proyecto' (79559487321). It includes a link to 'Ir a la configuración del proyecto'.
 - Recursos**: Shows 'Storage' with '2 segmentos'. It includes a link to 'Ir a la configuración del proyecto'.
 - Traza**: Displays 'No hay datos de traza de los últimos 7 días'. It includes a link to 'Empezar a utilizar Stackdriver Trace'.
- Empezar**: A section with four links: 'Descubre y habilita las API', 'Despliega una solución prediseñada', 'Añade registros dinámicos a una aplicación en ejecución', and 'Supervisa los errores con Error Reporting'.
- APIs**: A section titled 'Solicitudes (solicitudes/h)' with a line chart showing a value of 0.8. It includes a link to 'Ir a la visión general de las API'.
- Estado de Google Cloud Platform**: A section titled 'Estado de todos los servicios: normal'. It includes a link to 'Ir al panel de estado de Cloud'.
- Error Reporting**: A section titled 'No hay rastro de ningún error. ¿Has configurado Error Reporting?'. It includes a link to 'Aprende a configurar Error Reporting'.
- Noticias**: A section with three news items: 'Advancing academic research through our relationship with Internet2', 'Last month today: February on the Google Cloud blog', and 'Celebrating our partners who have achieved Specialization in Fall 2018'. It includes a link to 'Leer todas las noticias'.
- Documentación**: A section with three links: 'Más información sobre App Engine', 'Más información sobre Compute Engine', and 'Más información sobre Cloud SQL'.

The URL at the bottom of the console is <https://console.cloud.google.com/home/dashboard/project/cc-test/234210>.

Step 2: setting up the project in gcloud CLI

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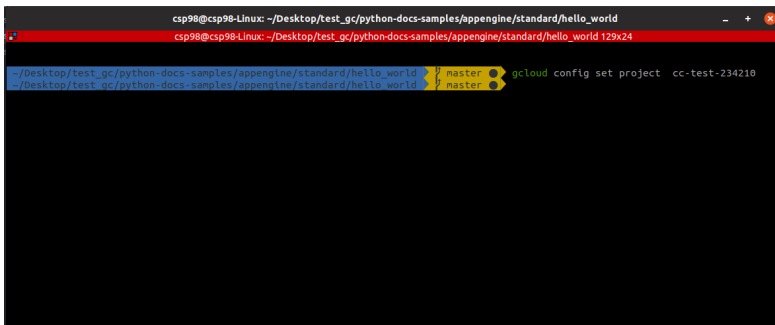
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```
csp98@csp98-Linux: ~/Desktop/test_gc/python-docs-samples/appengine/standard/hello_world
csp98@csp98-Linux: ~/Desktop/test_gc/python-docs-samples/appengine/standard/hello_world 129x24

~/Desktop/test_gc/python-docs-samples/appengine/standard/hello_world } master ● gcloud config set project cc-test-234210
~/Desktop/test_gc/python-docs-samples/appengine/standard/hello_world } master ●
```

Step 3: testing the app in the local machine

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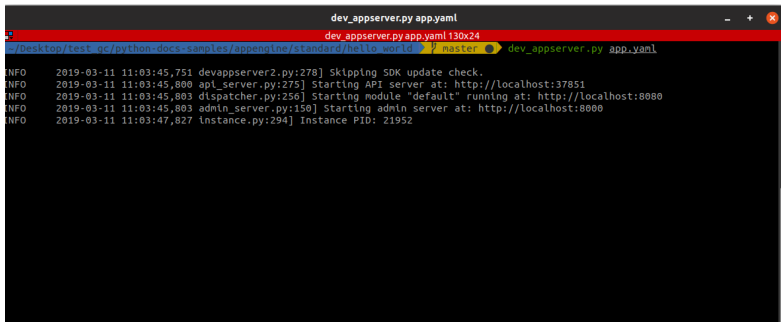
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Let's try it!



A terminal window titled "dev_appserver.py app.yaml" with a red title bar. The window shows the command `dev_appserver.py app.yaml` being executed. The output displays log messages from the Google App Engine SDK, including skipping the SDK update check, starting the API server at `http://localhost:37851`, starting the dispatcher module at `http://localhost:8080`, starting the admin server at `http://localhost:8080`, and finally starting the instance with PID 21952.

```
dev_appserver.py app.yaml 130x24
~/Desktop/test_gc/python-docs-samples/appengine/standard/hello_world: Master dev_appserver.py app.yaml
INFO     2019-03-11 11:03:45,751 devappserver2.py:278] Skipping SDK update check.
INFO     2019-03-11 11:03:45,800 api_server.py:275] Starting API server at: http://localhost:37851
INFO     2019-03-11 11:03:45,803 dispatcher.py:256] Starting module "default" running at: http://localhost:8080
INFO     2019-03-11 11:03:45,803 admin_server.py:150] Starting admin server at: http://localhost:8080
INFO     2019-03-11 11:03:47,827 instance.py:294] Instance PID: 21952
```


Step 3: testing the app in the local machine

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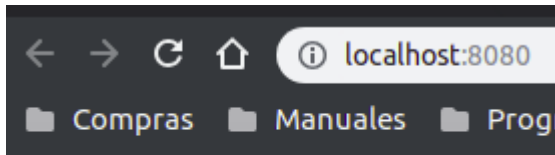
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Let's try it!



Hello world!

Step 4: modifying the app

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Let's try it!

```
dev_appserver.py app.yaml
dev_appserver.py app.yaml 130x24
~/Desktop/test_gc/python-docs-samples/appengine/standard/hello_world master ● dev_appserver.py
INFO 2019-03-11 11:03:45,751 devappserver2.py:278] Skipping SDK update check.
INFO 2019-03-11 11:03:45,800 api_server.py:275] Starting API server at: http://localhost:37851
INFO 2019-03-11 11:03:45,803 dispatcher.py:256] Starting module "default" running at: http://localhost:8000
INFO 2019-03-11 11:03:45,803 admin_server.py:150] Starting admin server at: http://localhost:8000
INFO 2019-03-11 11:03:47,827 instance.py:294] Instance PID: 21952
INFO 2019-03-11 11:04:10,239 module.py:861] default: "GET / HTTP/1.1" 200 12
INFO 2019-03-11 11:04:50,116 module.py:434] [default] Detected file changes:
/home/csp98/Desktop/test_gc/python-docs-samples/appengine/standard/hello_world/main.py
INFO 2019-03-11 11:04:51,146 instance.py:294] Instance PID: 22186
```

Step 4: modifying the app

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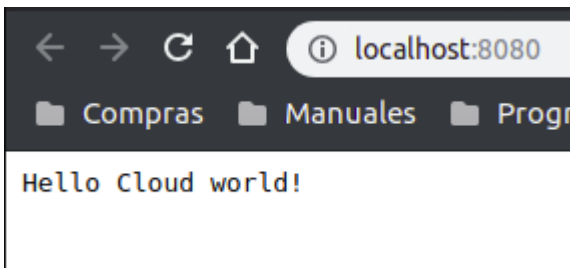
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Step 5: deploying the app

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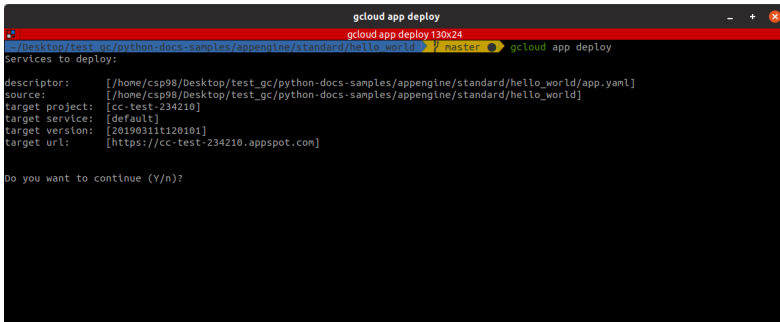
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```
gcloud app deploy
gcloud app deploy 130x24
~/Desktop/test_gc/python-docs-samples/appengine/standard/hello_world master ➜ gcloud app deploy
Services to deploy:

descriptor:    [/home/csp98/Desktop/test_gc/python-docs-samples/appengine/standard/hello_world/app.yaml]
source:        [/home/csp98/Desktop/test_gc/python-docs-samples/appengine/standard/hello_world]
target project: [cc-test-234210]
target service: [default]
target version: [20190311t120101]
target url:     [https://cc-test-234210.appspot.com]

Do you want to continue (Y/n)?
```

Step 5: deploying the app

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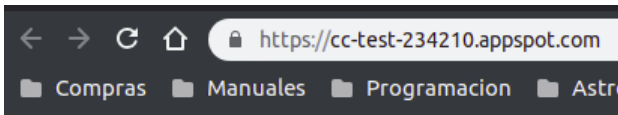
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Thanks for your attention!