

What is Google Cloud Platform?

Who uses it?

Google Cloud Platform products

Computing

Networking

Big Data

Machine Learning

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

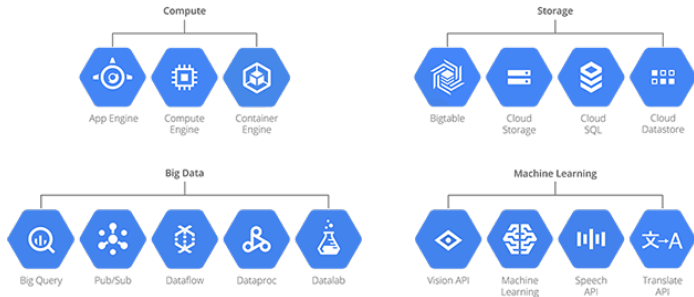
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Google Cloud Platform



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GCP Computing products

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

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GCP Networking products

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- 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.
- 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.
- 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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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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The screenshot shows the Google Cloud Platform console dashboard for a project named 'cc-test'. The interface is in Spanish and features a top navigation bar with the Google Cloud logo, project name, and a search icon. Below the navigation bar, the dashboard is organized into several sections:

- PANEL DE CONTROL (Control Panel):** Contains three main cards:
 - Información del proyecto (Project Information):** Displays project details such as 'Nombre de proyecto' (cc-test), 'ID del proyecto' (cc-test-234210), and 'Número del proyecto' (795595487321). It includes a link to 'Ir a la configuración del proyecto'.
 - Recursos (Resources):** Shows 'Storage' with '2 segmentos'. It includes a link to 'Ir a la configuración del proyecto'.
 - Traza (Trace):** Indicates 'No hay datos de traza de los últimos 7 días' and provides a link to 'Empezar a utilizar Stackdriver Trace'.
- Empezar (Get Started):** A section with four steps:
 - 1. 'API: Descubre y habilita las API' (API: Discover and enable APIs)
 - 2. 'Despliega una solución prediseñada' (Deploy a predefined solution)
 - 3. 'Añade registros dinámicos a una aplicación en ejecución' (Add dynamic logs to a running application)
 - 4. 'Supervisa los errores con Error Reporting' (Monitor errors with Error Reporting)
- APIs (APIs):** A section titled 'APIs' with a sub-header 'Solicitudes (solicitudes/n)' (Requests (requests/n)). It displays a line chart showing zero activity over a 24-hour period. A message states 'No hay datos disponibles del periodo.' (No data available for the period.) and a link to 'Ir a la visión general de las API' (Go to the API overview) is provided.
- Estado de Google Cloud Platform (Google Cloud Platform Status):** Shows 'Estado de todos los servicios: normal' (Status of all services: normal) and a link to 'Ir al panel de estado de Cloud'.
- Error Reporting:** Displays 'No hay rastro de ningún error. ¿Has configurado Error Reporting?' (No error trace found. Have you configured Error Reporting?) and a link to 'Aprende a configurar Error Reporting'.
- Noticias (News):** A section with three news items, each with a title, a brief description, and a 'hace' (ago) timestamp. The first item is about 'Advancing academic research through our relationship with Internet2' (hace 3 días). The second is 'Last month today: February on the Google Cloud blog' (hace 3 días). The third is 'Celebrating our partners who have achieved Specialization in Fall 2018' (hace 4 días). A link to 'Leer todas las noticias' (Read all news) is at the bottom.
- Documentación (Documentation):** A section with three links: 'Más información sobre App Engine', 'Más información sobre Compute Engine', and 'Más información sobre Cloud SQL'.

At the bottom left of the dashboard, a URL is displayed: <https://console.cloud.google.com/home/dashboard?project=cc-test-234210>.

Step 2: setting the project in gcloud CLI

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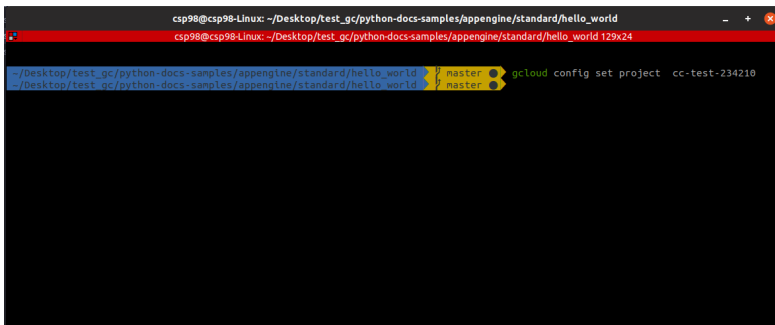
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```
csp98@csp98-Linux: ~/Desktop/test_gc/python-docs-samples/appengine/standard/hello_world
csp98@csp98-Linux: ~/Desktop/test_gc/python-docs-samples/appengine/standard/hello_world 129x24

~/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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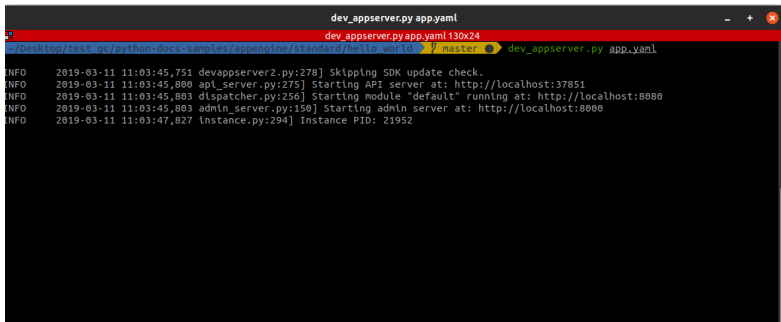
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Let's try it!



```
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 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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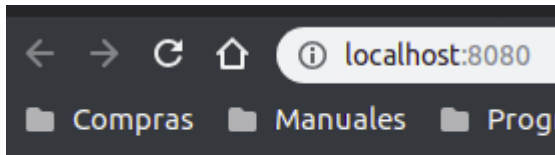
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Hello world!

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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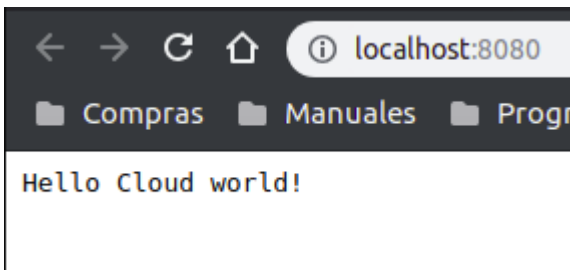
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Step 5: deploying the app

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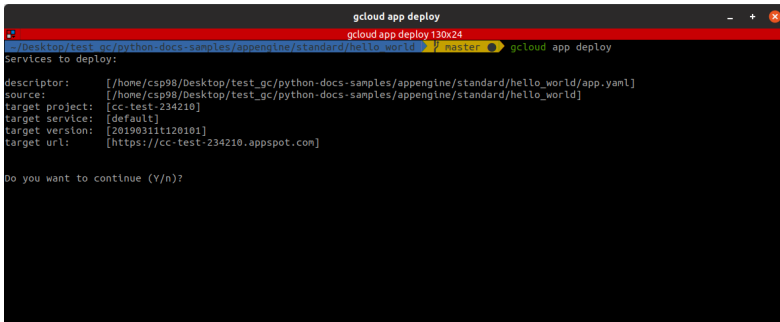
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```
gcloud app deploy
gcloud app deploy 130x24
~/Desktop/test_gc/python-docs-samples/appengine/standard/hello_world master ➤ gcloud app deploy
Services to deploy:

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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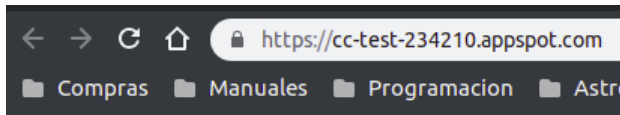
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Thanks for your attention!