



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?



What is Google Cloud Platform?

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Let's try it!

- Set of Google's computing resources.

What is Google Cloud Platform?



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.

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.
- Number 3 in the public cloud market (behind AWS and Azure).

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.
- 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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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.
- 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

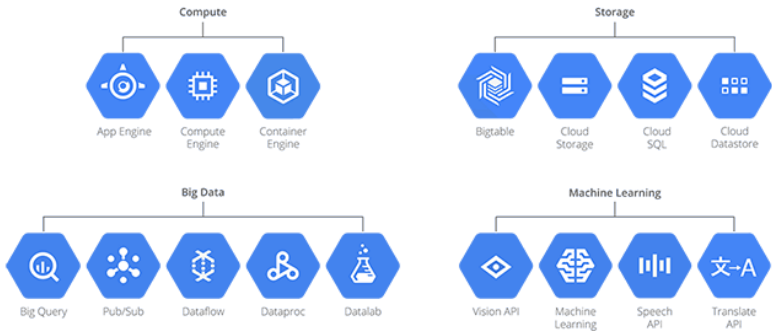
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GCP Computing products



What is Google Cloud Platform?

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Let's try it!

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



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).



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).
- Kubernetes: run containers (Docker).



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GCP Networking products



What is Google Cloud Platform?

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Let's try it!

- Cloud Armor: protection against DoS attacks.



GCP Networking products



What is Google Cloud Platform?

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Let's try it!

- Cloud Armor: protection against DoS attacks.
- 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.
- 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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- Dataprep: clean data for analysis.



GCP Big Data products



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Let's try it!

- Dataprep: clean data for analysis.
- Dataflow: batch data processing.



GCP Big Data products



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Let's try it!

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



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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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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 dashboard for a project named 'cc-test'. The interface is divided into several sections:

- Panel de Control (Control Panel):** Contains project information, resources, and a 'Traza' (Trace) section.
- 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).
- Recursos (Resources):** Shows 'Storage' with 2 segments.
- Traza (Trace):** Indicates 'No hay datos de traza de los últimos 7 días' (No trace data from the last 7 days).
- Empezar (Get Started):** Provides links to 'APIs', 'Deploy a solution', 'Add dynamic logs', and 'Manage errors'.
- APIs:** A section for API management, currently showing 'No hay datos disponibles del periodo' (No data available for the period).
- Estado de Google Cloud Platform (Google Cloud Platform Status):** Shows 'Estado de todos los servicios: normal' (All services status: normal).
- Error Reporting:** Indicates 'No hay rastro de ningún error' (No error trace).
- Noticias (News):** Features articles about academic research, February blog posts, and Fall 2018 specialization.
- Documentación (Documentation):** Provides links to documentation for App Engine, Compute Engine, and 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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Let's try it!

```
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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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 several log messages indicating the startup of the application servers. The terminal window is overlaid on a desktop background that shows a file explorer window with the path `~/Desktop/test_gc/python-docs-samples/appengine/standard/hello_world` and a "Master" button.

```
dev_appserver.py app.yaml
~/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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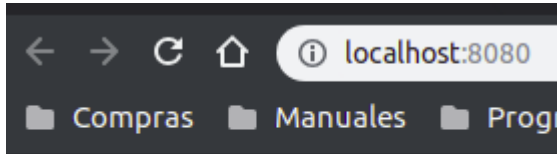
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Hello world!

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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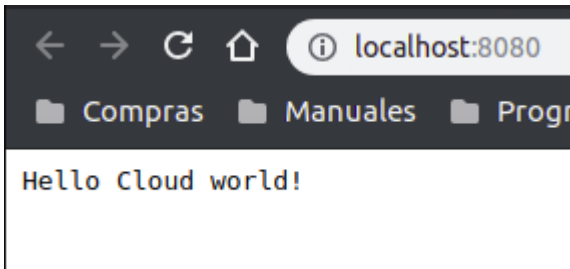
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Step 5: deploying the app



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Let's try it!

```
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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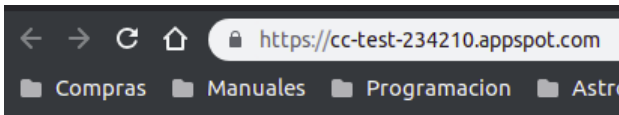
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Let's try it!

Thanks for your attention!

Source code available at <http://www.github.com/csp98>

