

UNIVERSIDAD
COMPLUTENSE
DE MADRID





Alta en Google Cloud

Alta en Google Cloud

¿ Cómo empiezo con Google Cloud ?

Lo primero es abrir un navegador y acceder a <https://cloud.google.com/>

Necesitarás una cuenta de gmail y una tarjeta de crédito. Google te dá gratis 300\$ para trabajar y una vez consumidos será tu decisión darte de baja o no.



Alta en Google Cloud

 Google Cloud [Por qué elegir Google](#) [Soluciones](#) [Productos](#) [Precios](#) [Primeros pasos](#)

 [Documentación](#) [Asistencia](#) [Language](#) [Consola](#) 

[Contactar con Ventas](#)

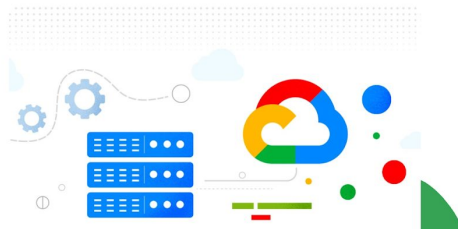
[Empezar gratis](#)

Crea, moderniza y escala

Transforma tu negocio con Google Cloud

[Empezar gratis](#)

[Contactar con Ventas](#)



Pulsar sobre
el enlace
“Empezar
Gratis”



Alta en Google Cloud

Prueba Google Cloud Platform de forma gratuita

Paso 1 de 2

País

España

Condiciones del servicio

- ☒ Acepto las [condiciones del servicio de Google Cloud Platform](#) y las condiciones del servicio de [cualquier servicio o API pertinente](#). También he leído y acepto las [condiciones del servicio de la prueba gratuita de Google Cloud Platform](#).

Debes marcar esta casilla para continuar

Novedades por correo electrónico

- ☐ Quiero recibir periódicamente correos electrónicos con noticias, novedades de productos y ofertas especiales de Google Cloud y de los Google Cloud Partners.

ACEPTAR Y CONTINUAR

Acceso a todos los productos de Cloud Platform

Consigue todo lo que necesitas para desarrollar y ejecutar tus aplicaciones, sitios web y servicios, incluidos Firebase y la API de Google Maps.

Crédito de 300 \$ gratuito

Regístrate y consigue 300 \$ para gastarlos en Google Cloud Platform durante los próximos 12 meses.

Sin cargos automáticos cuando finaliza el periodo de prueba gratuito

Solo te pedimos los datos de la tarjeta de crédito para comprobar que no eres un robot. No se te cobrará nada a menos que actualices la cuenta manualmente a la versión de pago.

Pulsar sobre el enlace “Empezar Gratis”



Alta en Google Cloud

Prueba Google Cloud Platform de forma gratuita

Paso 2 de 2

Perfil de pagos ⓘ

Escoge el perfil de pagos que se va a asociar con esta cuenta o transacción. El perfil de pagos se comparte y se usa en todos los productos de Google.



Pedro pablo

Perfil de Particular para Play, Google Fotos y Google Store

ID de perfil de pagos: 5980-6307-6174



Información sobre el cliente



Tipo de cuenta ⓘ

Particular



Nombre y dirección ⓘ



Pedro pablo

Te damos la bienvenida a un sistema de seguridad de categoría

Tu negocio merece una base sólida. Lo estás protegiendo con la infraestructura segura desde el diseño, la red mundial y la protección integrada de Google.

Crédito de 300 \$ gratuito

Disfruta y usa, de forma gratuita y limitada, BigQuery, Compute, Storage y otros productos principales durante 12 meses. Además, te regalamos un crédito de 300 \$.

Sin permanencia ni cargos automáticos

Solo te pediremos los datos de tu tarjeta de crédito para comprobar que no eres un robot. No se te cobrará nada a menos que actualices la cuenta de forma manual a una versión de pago.

Rellena los campos con tu información



Alta en Google Cloud

Tipo de pago



Pagos automáticos mensuales

Pagas todos los meses a través de un cargo automático cuando vence el pago.

Método de pago ⓘ

VISA

Visa •••• 7884



INICIAR VERSIÓN DE PRUEBA GRATUITA



Tu negocio merece una base sólida. Lo estás protegiendo con la infraestructura segura desde el diseño, la red mundial y la protección integrada de Google.

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Rellena los campos con tu información



Cuatro maneras de Interactuar con Google Cloud



**Consola Google
Cloud Platform**

Interface Web



**Cloud SDK y
Cloud Shell**

Interface línea
de comandos



**REST-based
API**

Para
aplicaciones a
medida

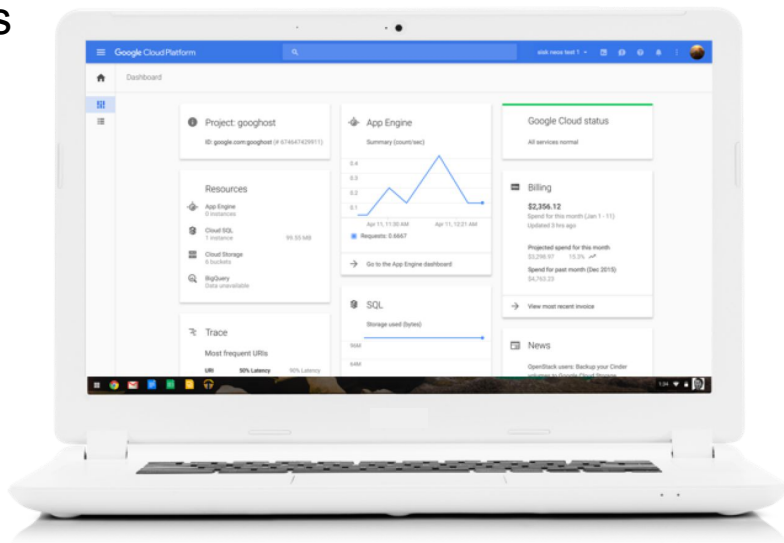


**Cloud Console
mobile app**

Para iOS y
Android

La consola de Google Cloud proporciona una web para que puedas administrar tus proyectos y recursos de Google Cloud

- Consola centralizada para todos los datos del proyecto.
- Ejecutar tareas comunes.
- Gestionar y crear proyectos.
- Acceso a herramientas de desarrollador:
 - Cloud Source Repositories
 - Cloud SDK
 - Cloud Shell
- Acceso a las APIs de los productos.



Logging en la consola de Google Cloud

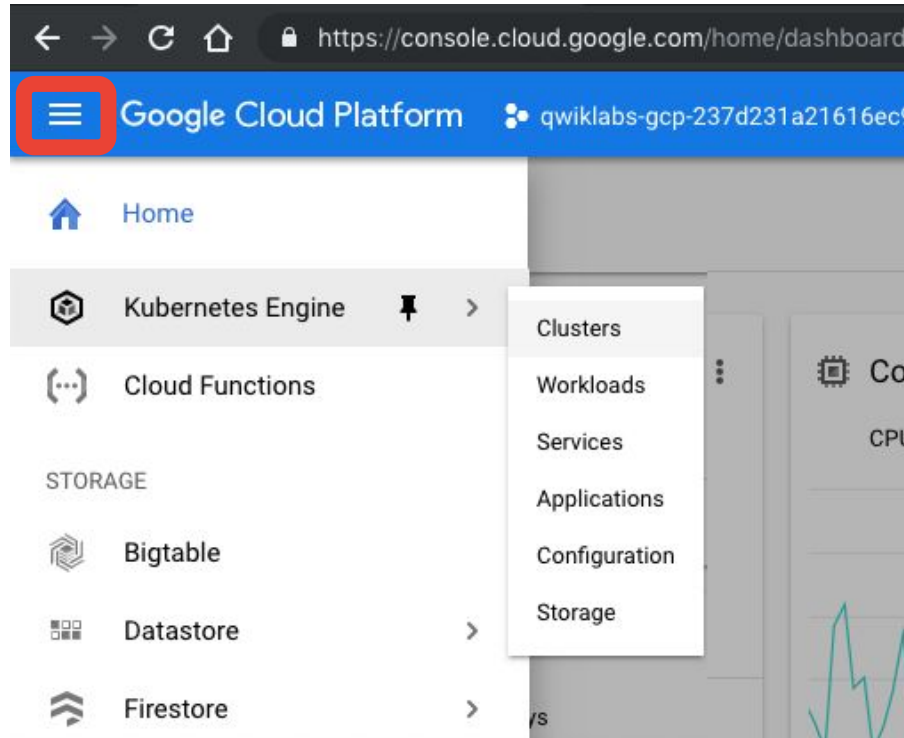
The screenshot displays the Google Cloud Platform console interface. At the top, a blue header bar contains the 'Google Cloud Platform' logo, a 'Project' dropdown menu, a search bar, and several utility icons (mail, chat, help, notifications, and user profile). Below the header, a navigation bar shows 'DASHBOARD' and 'ACTIVITY' tabs, with a 'CUSTOMIZE' link on the right.

The main content area is organized into several panels:

- Project info:** Displays project details including the name 'Project', ID 'nth-skyline-247917', and number '467846512270'. A link to 'Go to project settings' is provided.
- Resources:** A section indicating 'This project has no resources'.
- Trace:** A section stating 'No trace data from the past 7 days' with a link to 'Get started with Stackdriver Trace'.
- API APIs:** A panel for monitoring API requests. It shows a line chart for 'Requests (requests/sec)' with a y-axis ranging from 0 to 1.0. A warning icon and message state: 'No data is available for the selected time frame.' A link to 'Go to APIs overview' is at the bottom.
- Google Cloud Platform status:** A panel showing 'All services normal' and a link to 'Go to Cloud status dashboard'.
- Billing:** A panel showing 'Estimated charges' of 'USD \$0.00' for the billing period 'Jul 1 - 27, 2019'. A link to 'View detailed charges' is included.
- Error Reporting:** A panel stating 'No sign of any errors. Have you set up Error Reporting?' with a link to 'Learn how to set up Error Reporting'.
- News:** A section for the latest news, currently empty.

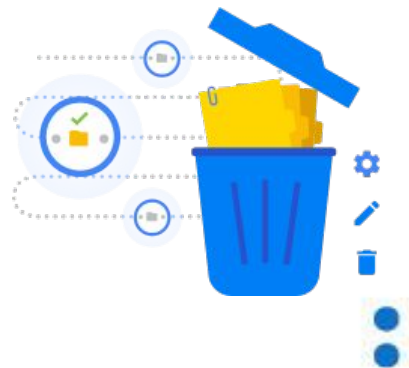


Interactuar con las consola de Google Cloud



Cada servicio de GCP que uses, estará asociado con un proyecto

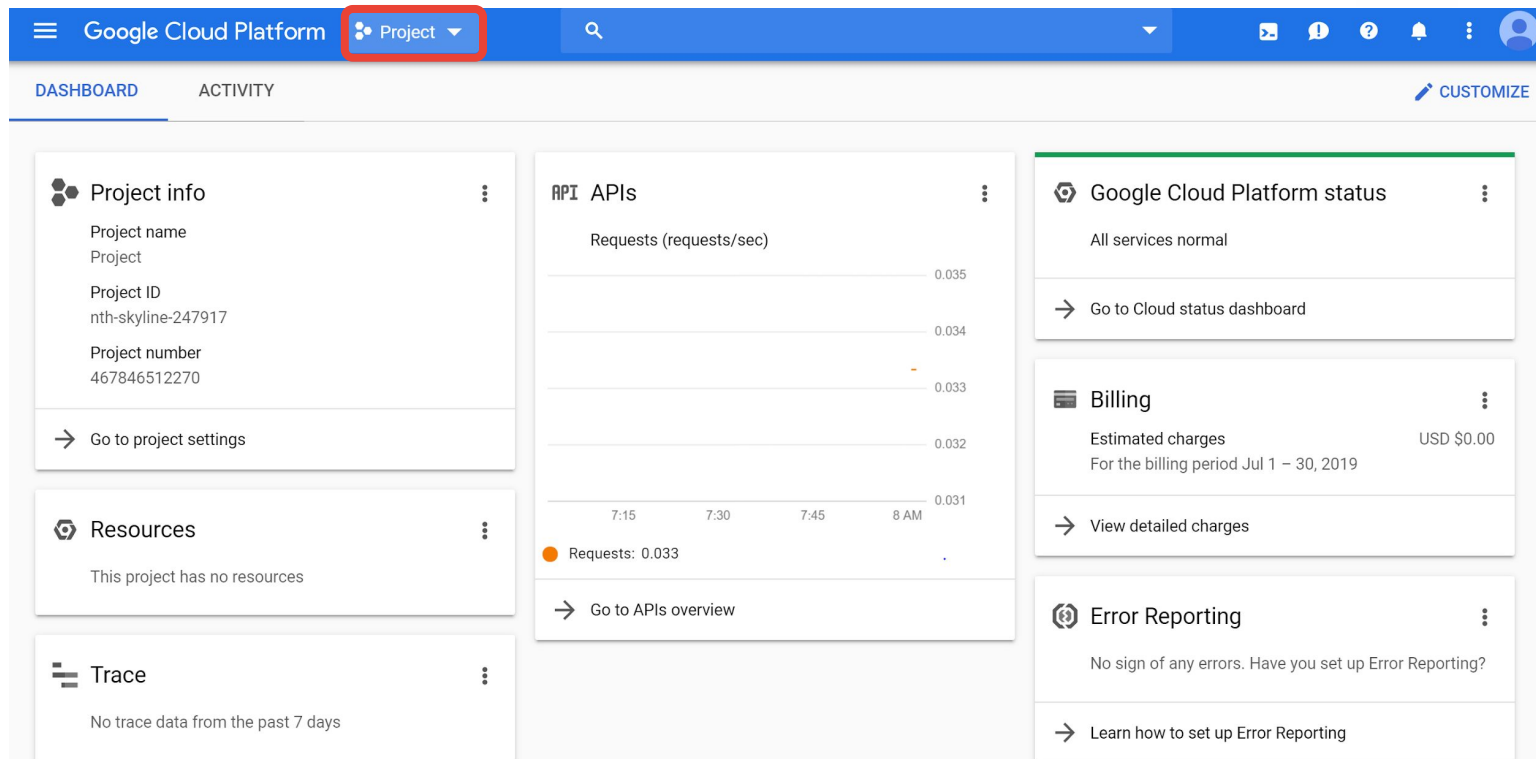
- Habilitar servicios y APIs.
- Administre programáticamente sus proyectos en GCP.
- Habilitar la facturación.
- Gestionar permisos y credenciales.
- Gestión del uso de recursos y cuotas.
- Administre programáticamente sus proyectos en GCP.



Los proyectos tienen tres atributos identificativos

Project ID	Project name	Project number
Globally unique	Need not be unique	Globally unique
Assigned by GCP but mutable during creation	Chosen by you	Assigned by GCP
Immutable after creation	Mutable	Immutable

Crear un proyecto



Crear un proyecto

The image shows the Google Cloud Platform 'New Project' dialog. A red box highlights the 'NEW PROJECT' button in the top right of the main interface. A blue arrow points from this button to the 'New Project' dialog. On the left, a green box contains the 'Select from' dropdown (set to 'NO ORGANIZATION'), a search bar, and 'RECENT'/'ALL' tabs. Five blue arrows point to specific fields in the dialog: 'Project name', 'Billing account', 'Organization', 'Location', and the 'CREATE' button.

Select from **NO ORGANIZATION** ▼

NEW PROJECT

Search projects and folders

RECENT ALL

Google Cloud Platform

New Project

Project name *
Project Example ?

Project ID: project-example-248312. 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.

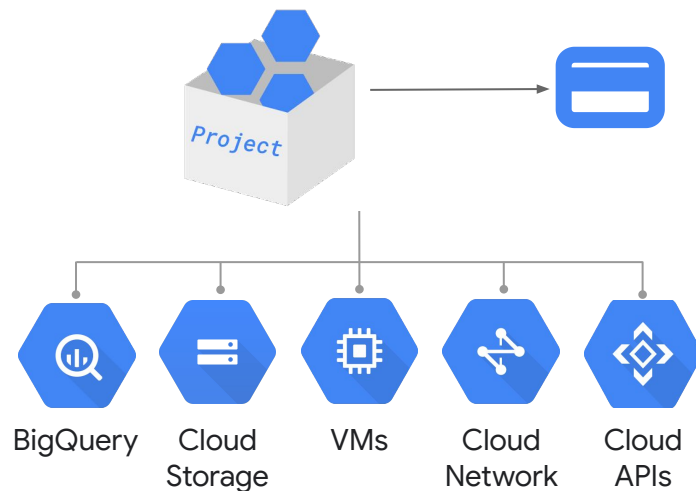
Organization ?
This project will be attached to

Location *
BROWSE
Parent organization or folder

CREATE CANCEL

¿ Cómo funciona la facturación ?

- ✓ La cuenta de facturación paga los recursos del proyecto.
- ✓ Una cuenta de facturación está vinculada a cero o más proyectos.
- ✓ Las cuentas se cobran automáticamente, se facturan mensualmente.
- ✓ Las subcuentas se pueden usar para facturación separada para proyectos.











Cómo mantener la facturación bajo control


- 1 Presupuestos y alertas
- 2 Exportar la facturación
- 3 Informes
- 4 Cuotas





Presupuestos y alertas para mantener tu facturación bajo control


 Google Cloud Platform Project ▾





 Billing

 Overview


 Budgets & alerts

 Transactions

 Billing export

 Payment settings

<|

Budgets & alerts Corporate Billing Account ▾ [+ CREATE BUDGET](#)  DELETE


Budgets track expenses within a Google Cloud Platform project or billing account. Your budget can be a specified amount or based on previous spend. You can set alerts to notify billing admins when a budget goes over a specified amount.

<input type="checkbox"/> Budget name ^	Budget type	Applies to	Trigger alerts at	Spend and budget amount
<input type="checkbox"/> Trial budget 1	Specified amount	This billing account	50%, 90%, and 100%	<div><div></div></div> \$86.34 / \$75.00



Exportar la facturación para analizar y almacenar detalles de los datos de facturación

The screenshot shows the Google Cloud Billing console. On the left, the 'Billing' menu is open, and 'Billing export' is selected. The main area shows the 'Billing export' settings for 'BTS-Billing'. Two blue arrows point to specific options: one from a 'BigQuery' icon to the 'BigQuery export' link, and another from a 'Cloud Storage' icon to the 'File export' link. The 'BigQuery export' section is active, showing a description and two dropdown menus for 'Project' and 'Billing export dataset', both set to 'orbitera-dm-test'. An 'Update BigQuery export settings' button is at the bottom.


Billing  BigQuery


Overview
Budgets & alerts
Transactions
Billing export
Payment settings

Billing export BTS-Billing


[BigQuery export](#) [File export](#)

BigQuery export sends your billing data to a BigQuery dataset [BigQuery](#)

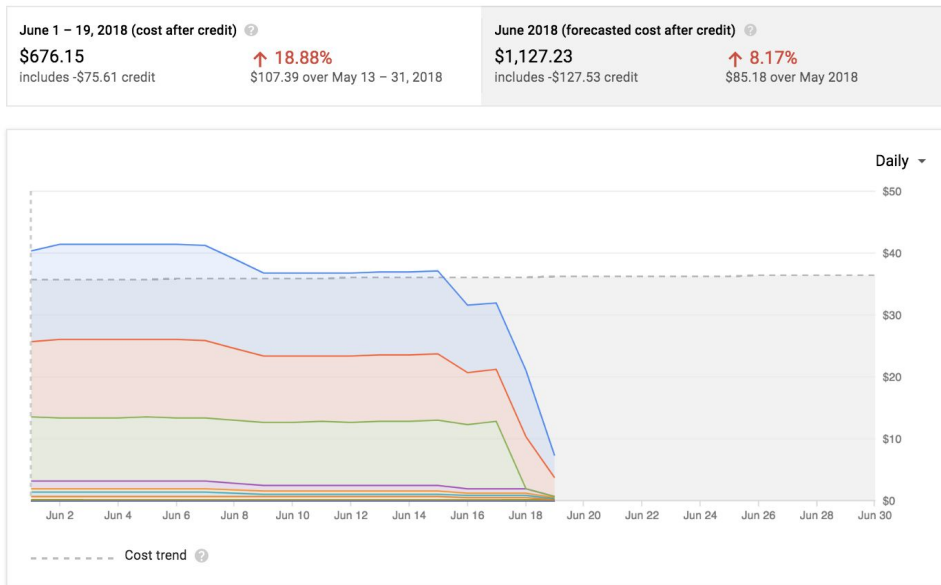
Project 
orbitera-dm-test

Billing export dataset 
orbitera_dm_test

[Update BigQuery export settings](#)

 Cloud Storage

Informes como herramienta visual para monitorizar los gastos



PROJECT	PROJECT ID	COST BEFORE CREDIT	CREDIT	COST AFTER CREDIT
● My Project 194	my-project-194-1378	\$287.07	-\$36.11	\$250.96
● My Project 301	my-project-301-1492	\$233.12	-\$31.00	\$202.12
● My Project 315	my-project-315-9812	\$175.00	\$0.00	\$175.00



Las cuotas son límites útiles



Rate Quota

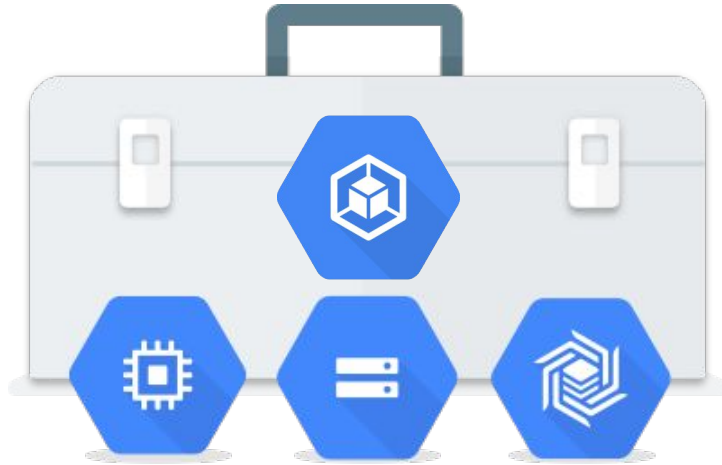
GKE API: 1,000 requests cada 100 segundos

Allocation Quota

5 redes por proyecto

Muchas de las cuotas son modificables por software

Google Cloud SDK es una interfaz de línea de comandos para los productos y servicios de Google Cloud



- gcloud
- gsutil
- bq

Instalar Google Cloud SDK

[Why Google](#)[Solutions](#)[Products](#)[Pricing](#)[Getting started](#)[Docs](#)[Support](#)[Language](#) ▼

Developer Tools

CLOUD SDK

Command-line interface for Google Cloud Platform products and services

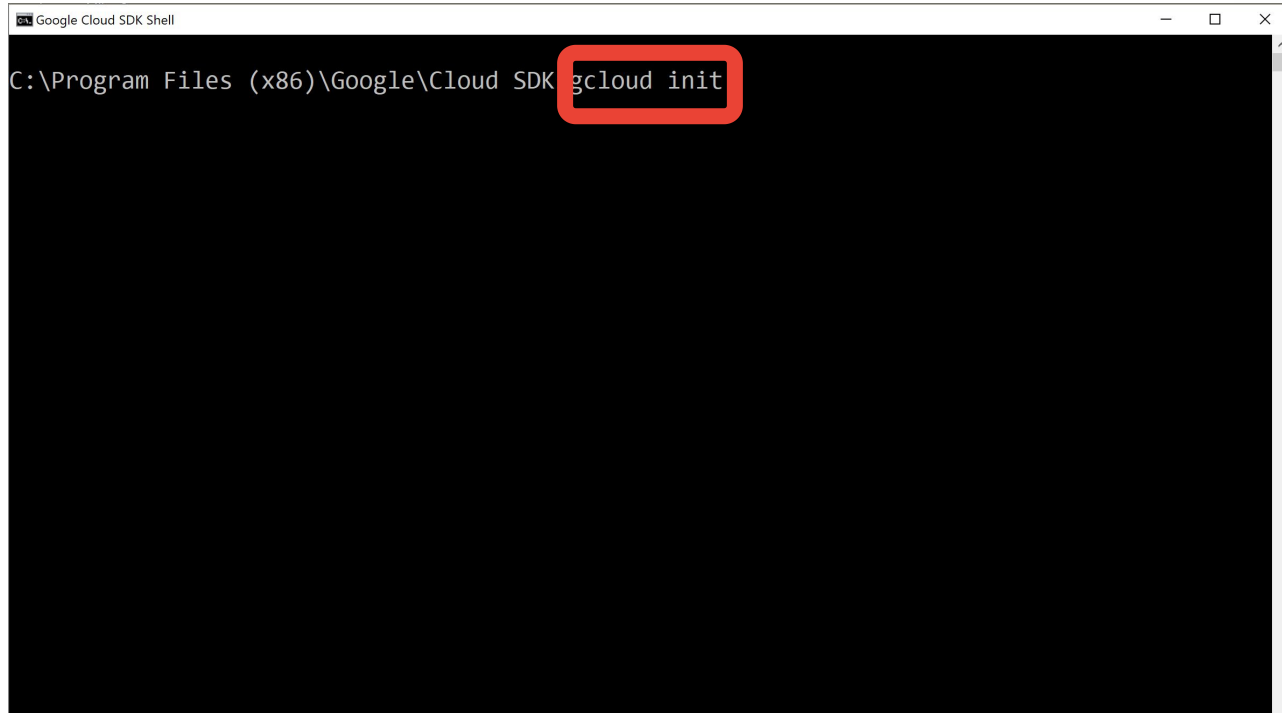
[INSTALL FOR WINDOWS](#)[VIEW DOCUMENTATION](#)

Essential Tools for Cloud Platform

The Cloud SDK is a set of tools for Cloud Platform. It contains gcloud, gsutil, and bq command-line tools, which you can use to access Google Compute Engine, Google Cloud Storage, Google BigQuery, and other products and services from the command-line. You can run these tools interactively or in your automated scripts.



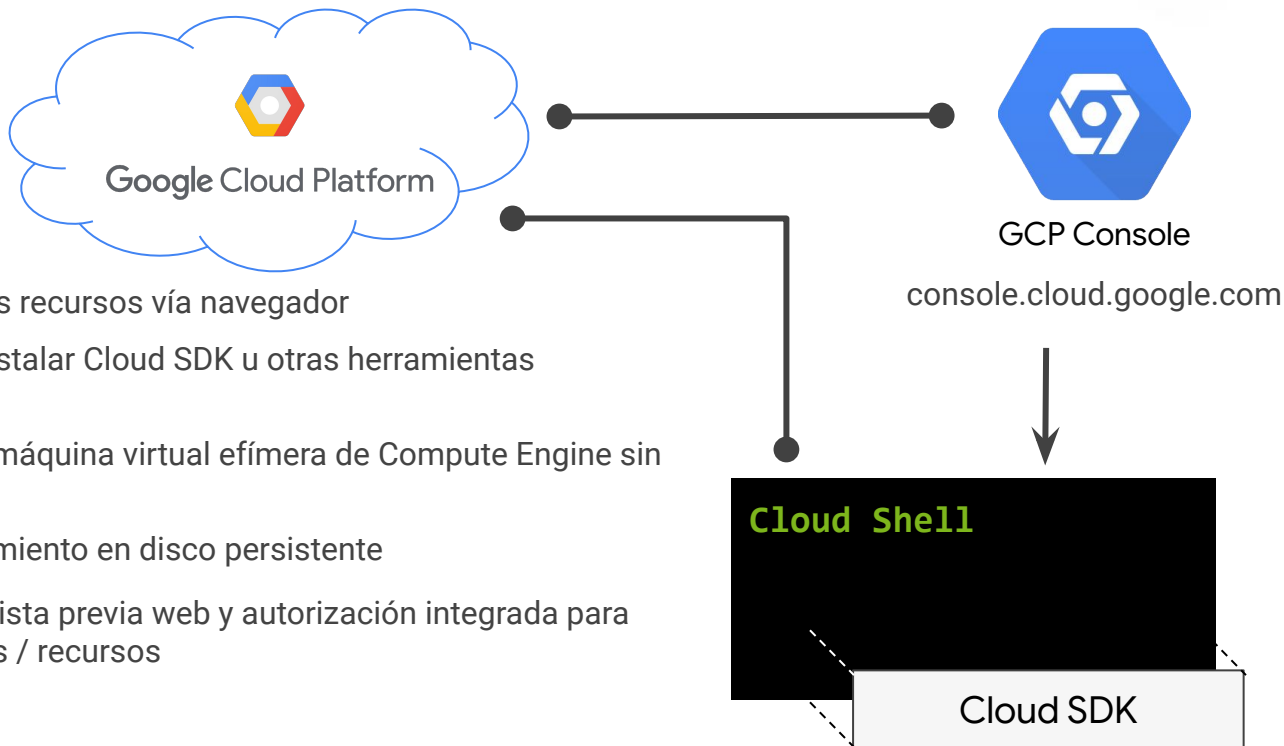
Configurar Google Cloud SDK



A screenshot of a terminal window titled "Google Cloud SDK Shell". The window has a black background with white text. The command prompt shows the path "C:\Program Files (x86)\Google\Cloud SDK\" followed by the command "gcloud init", which is highlighted with a red rectangular box. The terminal window includes standard Windows window controls (minimize, maximize, close) in the top right corner.

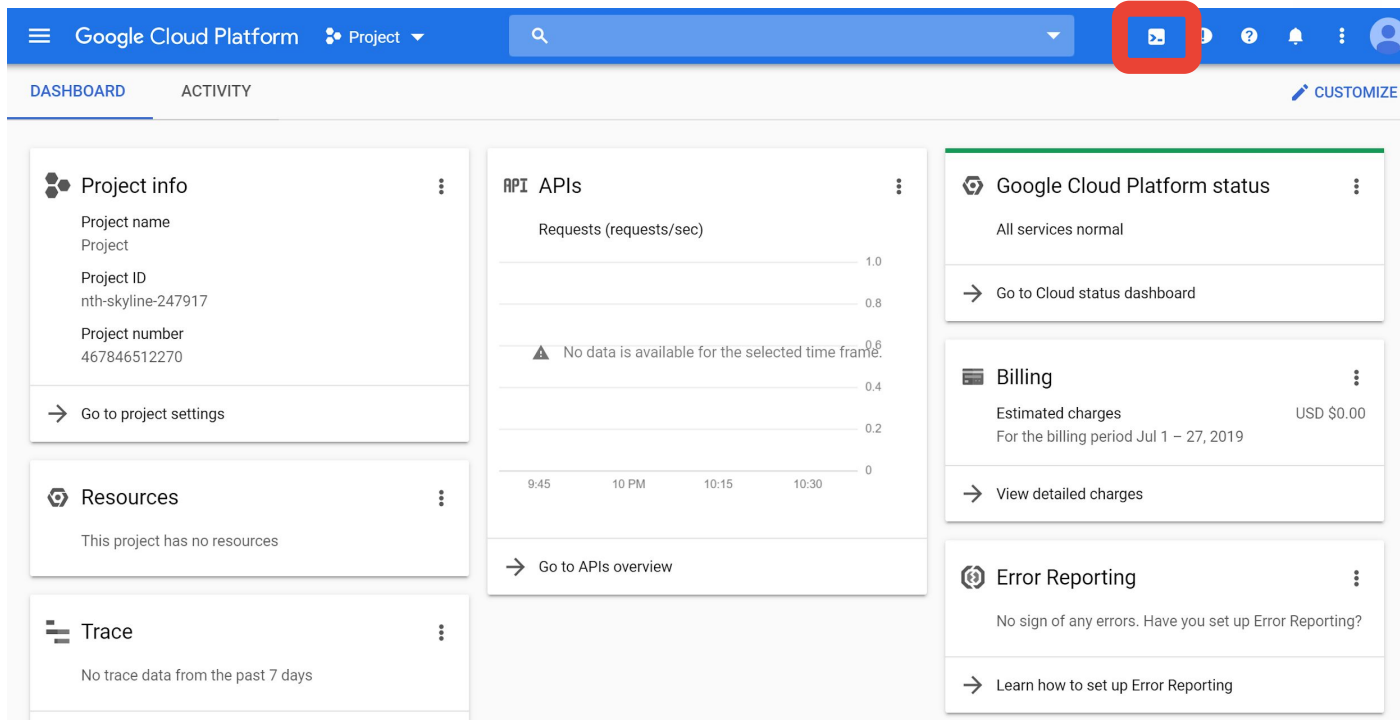
```
Google Cloud SDK Shell
C:\Program Files (x86)\Google\Cloud SDK\gcloud init
```


Google Cloud Shell es una alternativa al Google Cloud SDK



- Acceso de CLI a los recursos vía navegador
- No es necesario instalar Cloud SDK u otras herramientas localmente
- Se ejecuta en una máquina virtual efímera de Compute Engine sin coste
- 5 GB de almacenamiento en disco persistente
- Funcionalidad de vista previa web y autorización integrada para acceso a proyectos / recursos

Iniciar Google Cloud Shell



The screenshot shows the Google Cloud Platform dashboard. The top navigation bar is blue and contains the Google Cloud Platform logo, a project selector, a search bar, and a row of icons. The Cloud Shell icon, which is a terminal window with a red and blue background, is highlighted with a red square. Below the navigation bar, the dashboard is divided into several sections. On the left, there is a 'Project info' section with details like Project name, Project ID, and Project number. In the center, there is an 'API APIs' section with a line chart showing requests per second. On the right, there are sections for 'Google Cloud Platform status', 'Billing', and 'Error Reporting'. Each section has a link to view more details.

Google Cloud Platform Project

DASHBOARD ACTIVITY CUSTOMIZE

Project info

- Project name: Project
- Project ID: nth-skyline-247917
- Project number: 467846512270

→ Go to project settings

Resources

This project has no resources

Trace

No trace data from the past 7 days

API APIs

Requests (requests/sec)

No data is available for the selected time frame.

→ Go to APIs overview

Google Cloud Platform status

All services normal

→ Go to Cloud status dashboard

Billing

Estimated charges: USD \$0.00
For the billing period Jul 1 – 27, 2019

→ View detailed charges

Error Reporting

No sign of any errors. Have you set up Error Reporting?

→ Learn how to set up Error Reporting

Google Cloud Shell dentro de Google Cloud Console

The screenshot displays the Google Cloud Platform (GCP) console interface. At the top, the navigation bar includes the Google Cloud Platform logo, a 'Project' dropdown menu, a search bar, and various utility icons. Below the navigation bar, the 'DASHBOARD' tab is selected, showing a grid of widgets. The 'Project info' widget on the left lists the project name 'Project', Project ID 'nth-skyline-247917', and Project number '467846512270'. The 'API APIs' widget in the center shows a line graph for 'Requests (requests/sec)' with a warning that 'No data is available for the selected time frame'. The 'Google Cloud Platform status' widget on the right indicates 'All services normal' and provides a link to the 'Go to Cloud status dashboard'. Below this, the 'Billing' widget shows 'Estimated charges' of 'USD \$0.00' for the billing period 'Jul 1 - 27, 2019'. At the bottom of the console, the Google Cloud Shell terminal window is open, displaying the welcome message and the current project ID. The terminal window's title bar shows the project ID '(nth-skyline-247917)' and standard window controls. A red rectangle highlights the window control buttons (minimize, maximize, close) in the terminal window's title bar.

Google Cloud Platform

Project

DASHBOARD ACTIVITY CUSTOMIZE

Project info

Project name
Project

Project ID
nth-skyline-247917

Project number
467846512270

→ Go to project settings

API APIs

Requests (requests/sec)

1.0
0.8
0.6
0.4
0.2
0

⚠ No data is available for the selected time frame.

Google Cloud Platform status

All services normal

→ Go to Cloud status dashboard

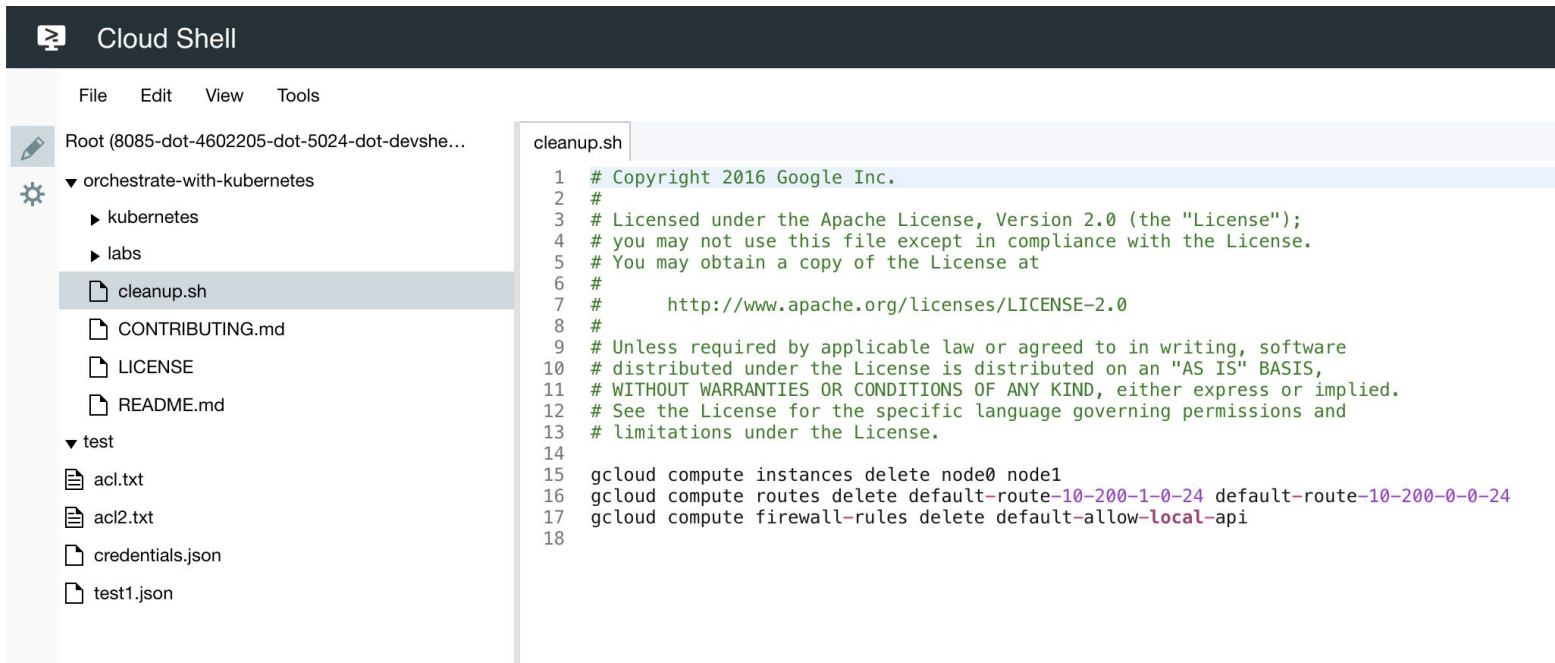
Billing

Estimated charges USD \$0.00
For the billing period Jul 1 - 27, 2019

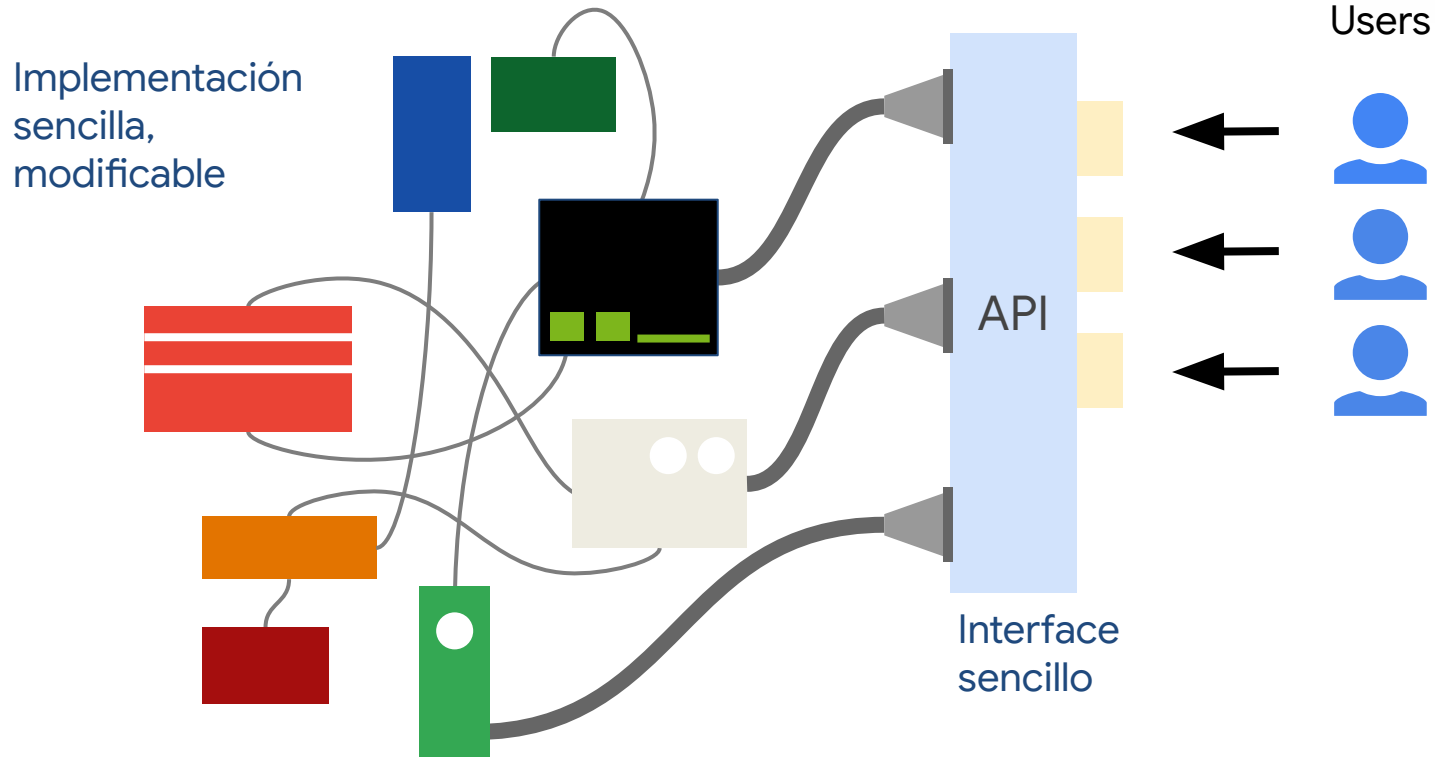
(nth-skyline-247917) x +

```
Welcome to Cloud Shell! Type "help" to get started.
Your Cloud Platform project in this session is set to nth-skyline-247917.
Use "gcloud config set project [PROJECT ID]" to change to a different project.
msutton@cloudshell:~ (nth-skyline-247917) $
```

El editor de código de Google Cloud Shell es la herramienta para editar archivos dentro de Google Cloud Shell



Las APIs ocultan los detalles y hacen cumplir los requerimientos



Los servicios que componen Google Cloud ofrecen APIs para que se pueda escribir código para controlarlos.



Las APIs RESTful se habilitan a través de la consola GCP.



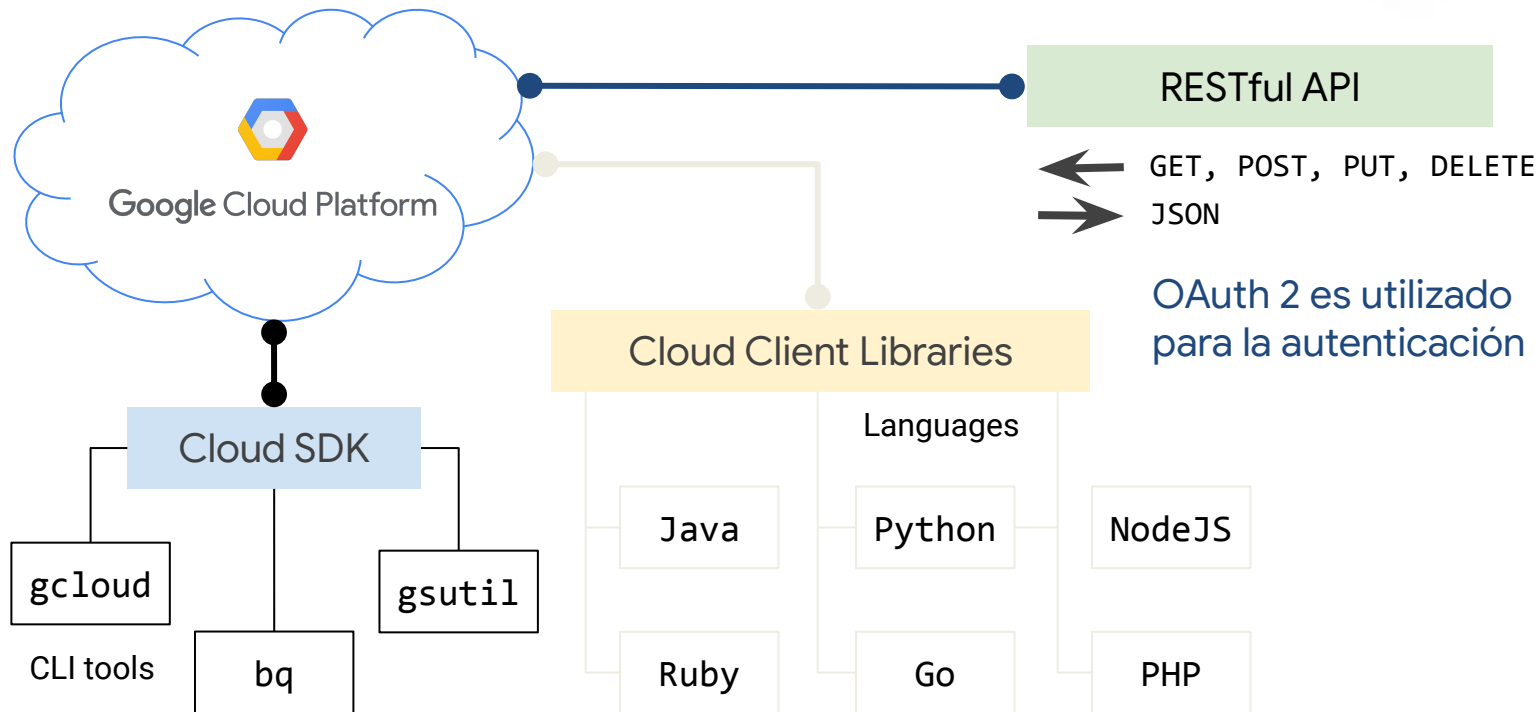
Se proporciona acceso programático a productos y servicios.

- El código generalmente usa JSON como formato de intercambio.
- Use OAuth 2.0 para autenticación y autorización.

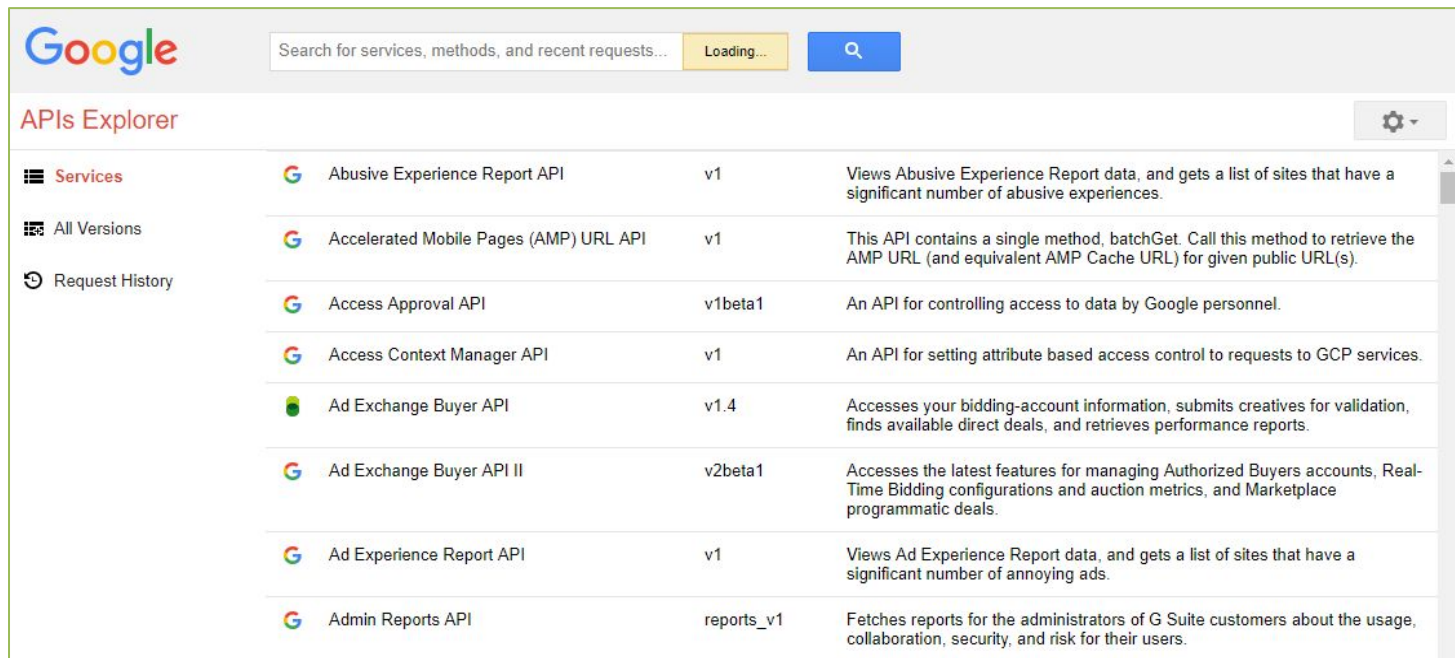


Para ayudarlo a controlar el gasto, la mayoría incluye cuotas y tasas diarias (límites). Las cuotas y las tarifas se pueden aumentar a pedido.

Utilice las bibliotecas del cliente para crear y administrar recursos.



Usa el Explorador de API de Google para ayudarte a escribir tu código




The screenshot shows the Google APIs Explorer interface. At the top is the Google logo and a search bar with the placeholder text "Search for services, methods, and recent requests...". Below the search bar is the "APIs Explorer" title. On the left side, there is a sidebar with a menu containing "Services", "All Versions", and "Request History". The main area displays a list of APIs with columns for the API name, version, and description. The APIs listed are:

API Name	Version	Description
Abusive Experience Report API	v1	Views Abusive Experience Report data, and gets a list of sites that have a significant number of abusive experiences.
Accelerated Mobile Pages (AMP) URL API	v1	This API contains a single method, batchGet. Call this method to retrieve the AMP URL (and equivalent AMP Cache URL) for given public URL(s).
Access Approval API	v1beta1	An API for controlling access to data by Google personnel.
Access Context Manager API	v1	An API for setting attribute based access control to requests to GCP services.
Ad Exchange Buyer API	v1.4	Accesses your bidding-account information, submits creatives for validation, finds available direct deals, and retrieves performance reports.
Ad Exchange Buyer API II	v2beta1	Accesses the latest features for managing Authorized Buyers accounts, Real-Time Bidding configurations and auction metrics, and Marketplace programmatic deals.
Ad Experience Report API	v1	Views Ad Experience Report data, and gets a list of sites that have a significant number of annoying ads.
Admin Reports API	reports_v1	Fetches reports for the administrators of G Suite customers about the usage, collaboration, security, and risk for their users.



Cómo probar un API:

Loading...Q

APIs Explorer⚙

Services

All Versions

Request History

Learn more about using the Compute Engine API by reading the [documentation](#).

Search Result > Compute Engine API v1 > compute.instances.listAuthorize requests using OAuth 2.0: ☐ OFF !

project

Project ID for this request. (string)

zone

The name of the zone for this request. (string)

filter

A filter expression that filters resources listed in the response. The expression must specify the field name, a comparison operator, and the value that you want to use for filtering. The value must be a string, a number, or a boolean. The comparison operator must be either =, !=, >, or <. For example, if you are filtering Compute Engine instances, you can exclude instances named example-instance by specifying name != example-instance. You can also filter nested fields. For example, you could specify scheduling.automaticRestart = false to include instances only if they are not scheduled for automatic restarts. You can use filtering on nested fields to filter based on resource labels. To filter on multiple expressions, provide each separate expression within parentheses. For example, (scheduling.automaticRestart = true) (cpuPlatform = "Intel Skylake"). By default, each expression is an AND expression. However, you can include AND and OR expressions explicitly. For example, (cpuPlatform = "Intel Skylake") OR (cpuPlatform = "Intel Broadwell") AND (scheduling.automaticRestart = true). (string)

maxResults

The maximum number of results per page that should be returned. If the number of available results is larger than maxResults, Compute Engine returns a nextPageToken that can be used to get the next page of results in subsequent list requests. Acceptable values are 0 to 500, inclusive. (Default: 500) (integer, 0+)

orderBy

Sorts list results by a certain order. By default, results are returned in alphanumerical order based on the resource name. You can also sort results in descending order based on the creation timestamp using orderBy="creationTimestamp desc". This sorts results based on the creationTimestamp field in reverse chronological order (newest result first). Use this to sort resources like operations so that the newest operation is returned first. Currently, only sorting by name or creationTimestamp desc is supported. (string)

pageToken

Specifies a page token to use. Set pageToken to the nextPageToken returned by a previous list request to get the next page of results. (string)

fields

Selector specifying which fields to include in a partial response.
[Use fields editor](#)

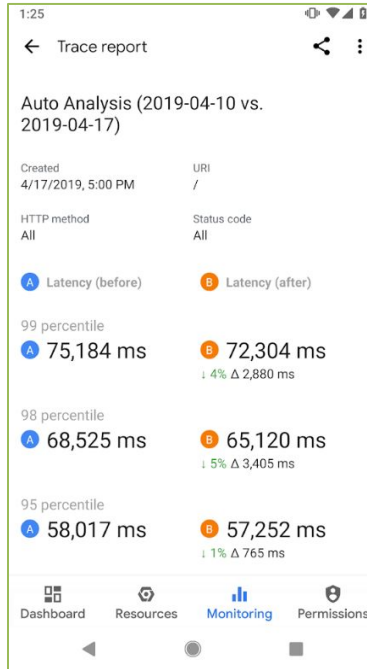
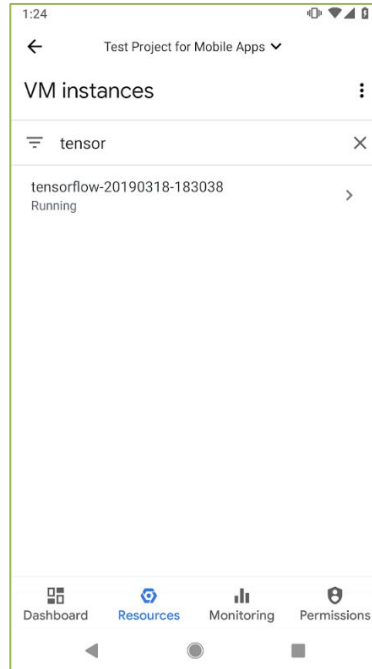
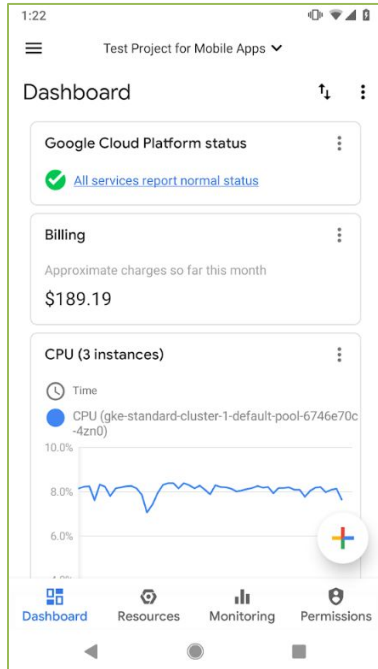
bold red = required

Authorize and execute

[Execute without OAuth](#)



Administra los servicios de Google Cloud desde tu Android o iOS



MUCHAS GRACIAS

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