Tech Accelerator

What is public cloud? Everything you need to know

DEFINITION

Google Cloud Platform (GCP)

Stephen J. Bigelow, Senior Technology Editor

Google Cloud Platform is a suite of underlined public cloud computing services offered by Google. The platform includes a range of hosted services for compute, storage and application development that run on Google hardware. Google Cloud Platform services can be accessed by software developers, cloud administrators and other enterprise IT professionals over the public internet or through a dedicated network connection.

Overview of Google Cloud Platform offerings

Google Cloud Platform offers services for compute, storage, networking, big data, machine learning and the internet of things (IoT), as well as cloud management, security and developer tools. The core cloud computing products in Google Cloud Platform include:

- Google Compute Engine, which is an infrastructure-as-a-service (IaaS) offering that provides users with virtual machine instances for workload hosting.
- Google App Engine, which is a platform-as-a-service (PaaS) offering that gives software developers access to Google's scalable hosting. Developers can also use a software developer kit (SDK) to develop software products that run on App Engine.
- Google Cloud Storage, which is a cloud storage platform designed to store large, unstructured data sets. Google also offers database storage options, including Cloud Datastore for NoSQL nonrelational storage, Cloud SQL for MySQL fully relational storage and Google's native Cloud Bigtable database.
- Google Container Engine, which is a management and orchestration system for Docker containers that runs within Google's public cloud. Google Container Engine is based on the Google Kubernetes container orchestration engine.

Google Cloud Platform offers application development and integration services. For example, Google Cloud Pub/Sub is a managed and real-time messaging service that allows messages to be exchanged between applications. In addition, Google Cloud Endpoints allows developers to create services based on RESTful APIs, and then make those services accessible to Apple iOS, Android and JavaScript clients. Other offerings include Anycast DNS servers, direct network interconnections, load balancing, monitoring and logging services.

Higher-level services

Google continues to add higher-level services, such as those related to big data and machine learning, to its cloud platform. Google big data services include those for data processing and analytics, such as Google BigQuery for SQL-like queries made against multi-terabyte data sets. In addition, Google Cloud Dataflow is a data processing service intended for analytics; extract, transform and load (ETL); and real-time computational projects. The platform also includes Google Cloud Dataproc, which offers Apache Spark and Hadoop services for big data processing.

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Which also includes:

**5 types of cloud skills that IT professionals should know**

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10 FAQs about cloud computing

For artificial intelligence (AI), Google offers its Cloud Machine Learning Engine, a managed service that enables users to build and train machine learning models. Various APIs are also available for the translation and analysis of speech, text, images and videos.

Google also provides services for IoT, such as Google Cloud IoT Core, which is a series of managed services that enables users to consume and manage data from IoT devices.

The Google Cloud Platform suite of services is always evolving, and Google periodically introduces, changes or discontinues services based on user demand or competitive pressures. Google's main competitors in the public cloud computing market include Amazon Web Services (AWS) and Microsoft Azure.
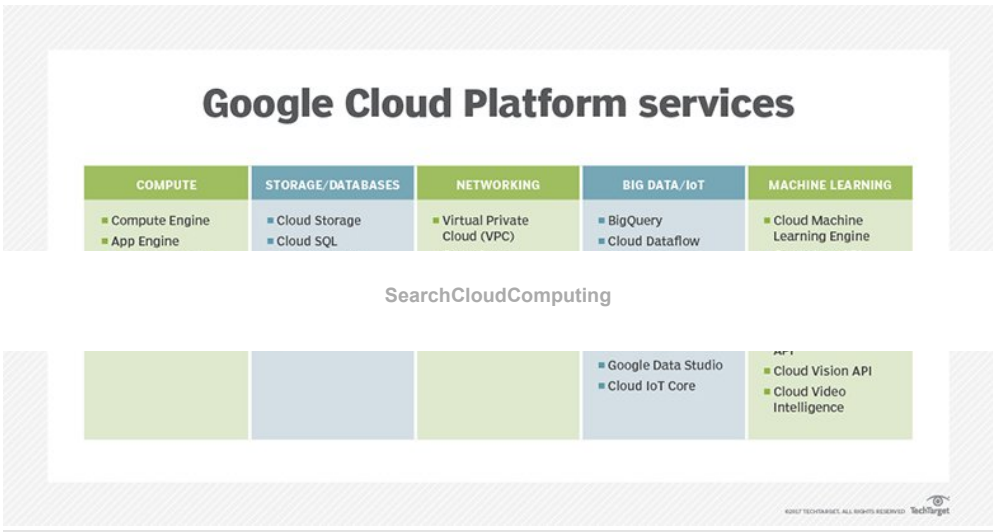
Google Cloud Platform pricing options

Like other public cloud offerings, most Google Cloud Platform services follow a pay-as-you-go model in which there are no upfront payments, and users only pay for the cloud resources they consume. Specific terms and rates, however, vary from service to service.

Google Cloud Platform certification

Google offers training programs and certifications related to Google Cloud Platform, including programs for cloud infrastructure, data and machine learning, application development and G suite administration, as well as an introductory program for its cloud platform. There are three Google cloud certifications an IT professional can earn: a Certified Professional Cloud Architect, a Certified Professional Data Engineer and a Certified Professional G Suite Administrator.

This was last updated in August 2017

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