GCP Certification Series: Section 2: Planning and configuring a Cloud solution, 2.1 Planning and estimating GCP product use using the Pricing Calculator

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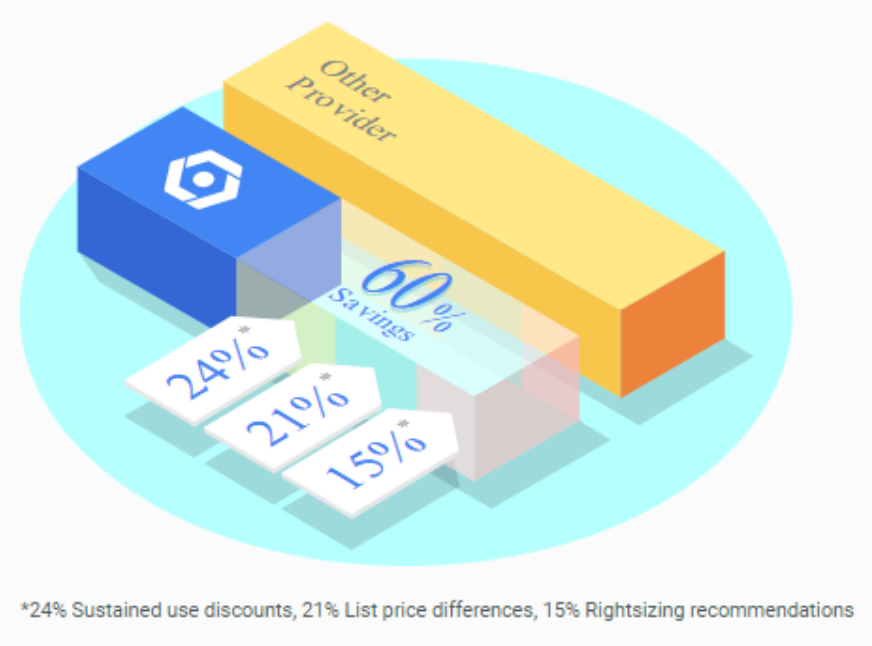
From the early days, since I started learning cloud, I have heard about Google making the pricing of its products in the cloud very competitive and scientific. Today we will dig deeper into what it is now and how the pricing is done in Google cloud.

Google says it has 60% savings in cost compared to other vendors.



GCP compared to others

These savings are achieved by

1. Sustained use discount: meaning that running the instances for a significant portion of the billing month will reduce the cost of an instance. ***More your instances are running bigger discount you will get.***

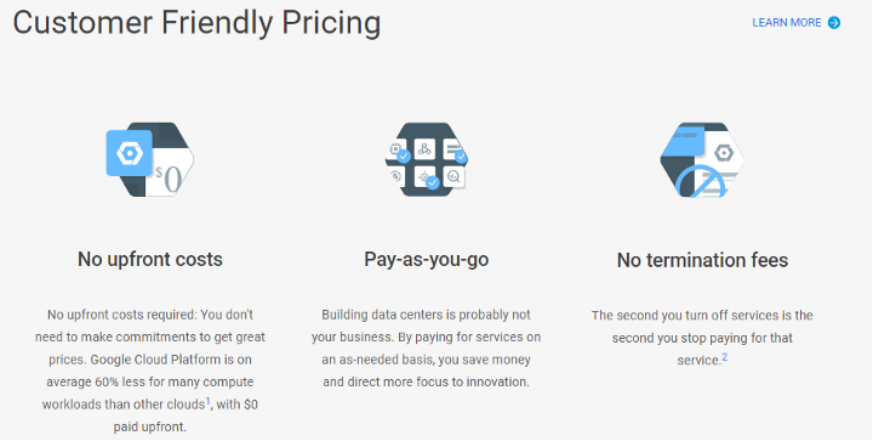
2. List price differences: Google is reducing the price of services and instances according to Moore's law and immediately after the price of any instance or services are reduced they are applied in your monthly billing. This way you always get discounted rate than the standard pricing of that item.

3. Rightsizing recommendations: Google cloud provides recommendations for compute engine based on the 8 days stack driver monitoring to resize the VM. If properly followed will result in savings up to 15% in total price for a month.

Google says: "Compute Engine provides machine type recommendations to help you optimize the resource utilization of your virtual machine instances. These recommendations are generated automatically based on system metrics gathered by the Google Stackdriver Monitoring service over the previous 8 days. Use these recommendations to resize your instance's machine type to more efficiently use the instance's resources. This feature is also known as Rightsizing Recommendations."

The important thing to note here is that Google doesn't have any third party payment services. All the billings are on the platform and directly with Google. This largely avoids the hassle for users who want to use the services but are afraid of being fooled by the third party. There are no additional discounts other than calculated by the system and customers don't need to ask for a discount, they are included automatically. This avoids the need for bargaining of the services which is profound in other IT services.

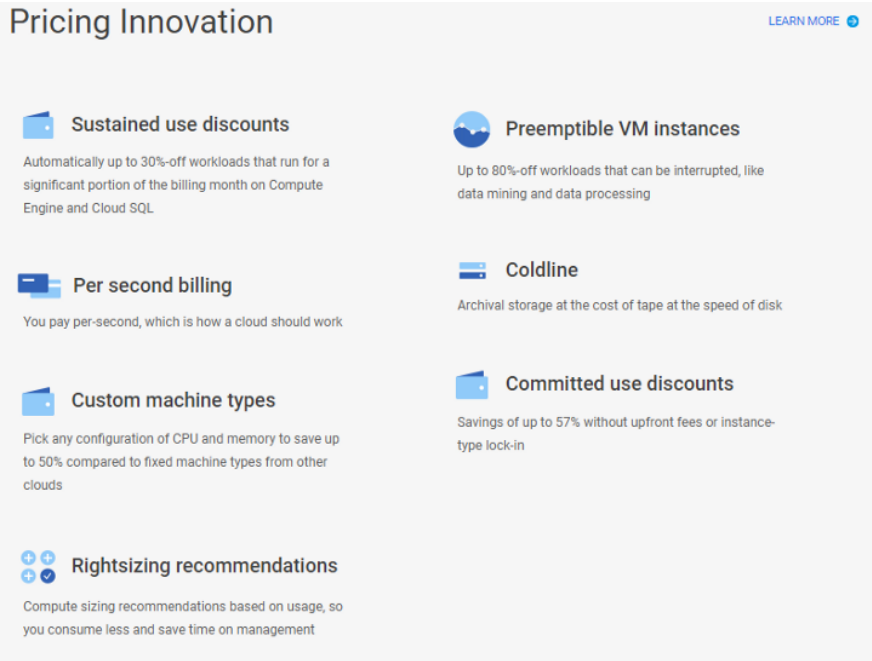
Google has no upfront cost in using their basic product and services in GCP.



After setting up GCP account and billing you get a startup amount and if you plan to use GCP you will not be billed until the free balance and time exceed the limit set on the free tier.

You don't have to deposit any amount for using GCP products and services. Payment usually is done once a month based on usage.

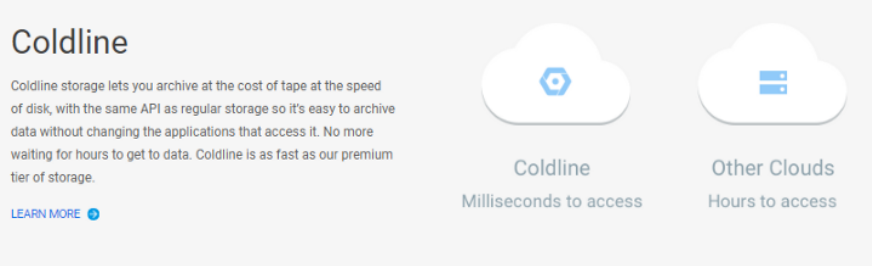
You can terminate the account anytime you want.No termination fees are applied.



Another thing to note is using preemptive VM instances will reduce the cost of the GCP as Google has a special discount for these kinds of machines.

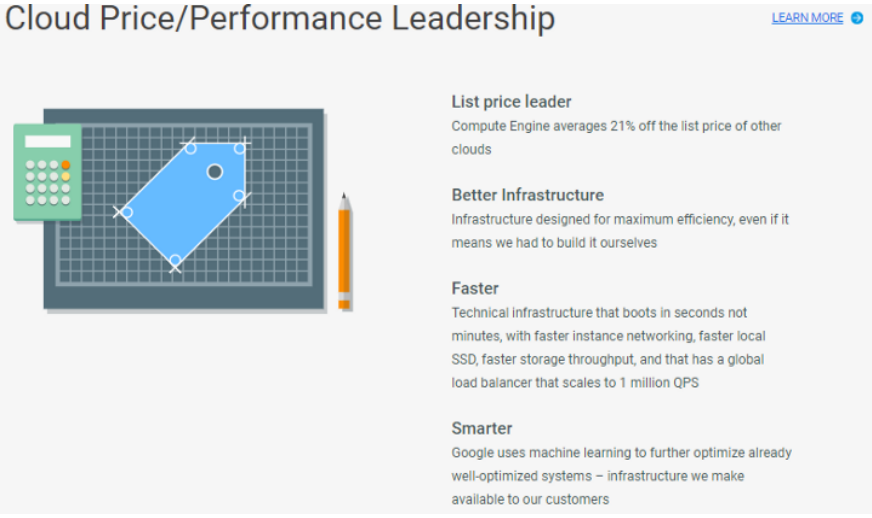
Now, Google will calculate the price in per second basis. This is especially useful for those instances that last for a few seconds and destroys itself. For example, a file processing system where one file is uploaded and processed and downloaded in the client machine.

Data that are not frequently in use can be stored in the cold line storage medium which is much cheaper than persistent or SSD. The advantages of Google over long-term storage media are it can be accessed as normal storage and don't have to wait for hours.



A user has the choice of using any type of machine with any configuration which has clear cost benefits over fixed type machine from other vendors.

Users also get a discount on Committed use over some time period.



Pricing Calculator

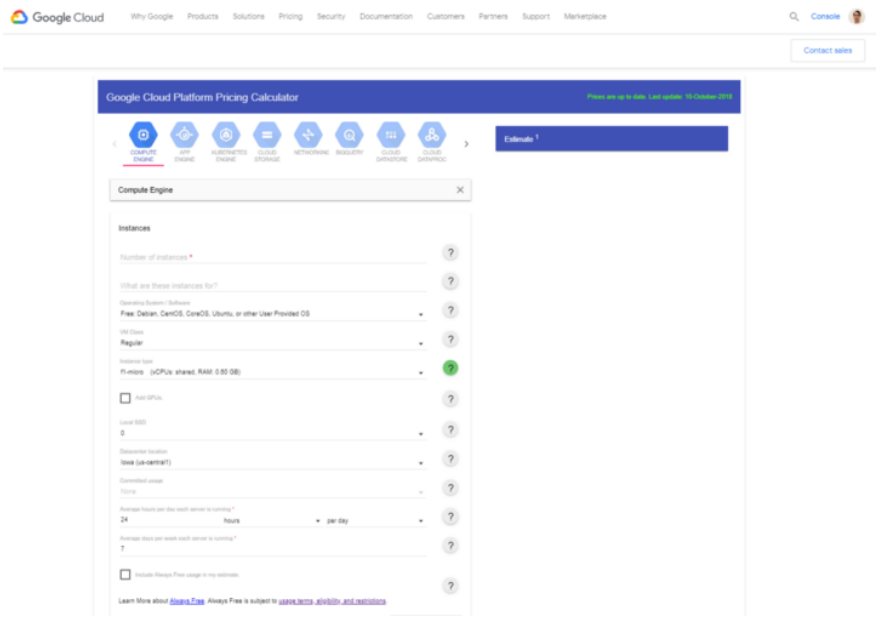
For convenience, Google has built a service where customers can predict the price of using instances and services in Google Cloud Platform. This service is called Pricing calculator.

You can access this webpage in

Google Cloud Platform Pricing Calculator | Google Cloud Platform | Google Cloud

Create your own Custom Price Quote for the products offered through Google Cloud Platform...

cloud.google.com



Before directly jumping into the website you should already know

1. what you are building?
2. where you are hosting?
3. what components are required for that system?

Then you can list all those instances and provide it to pricing calculator that will give you the tentative amount per month or the period you select.

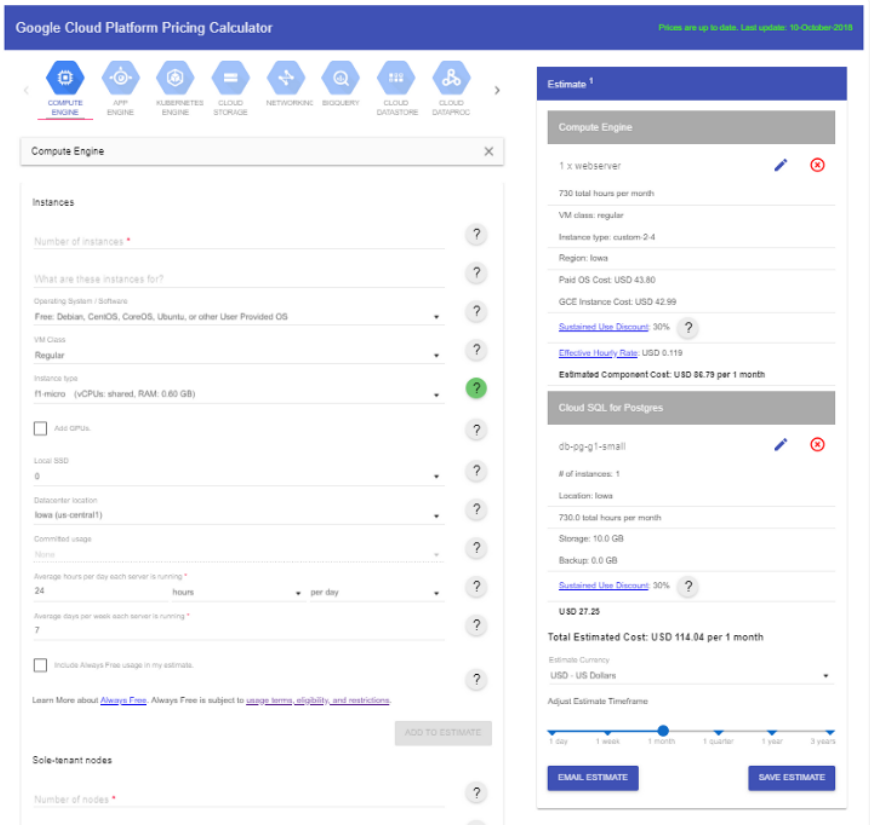
For example, I am hosting a dynamic website in Finland which will be accessible through the world. I will have a database for storing the information from the form in the website which will be name and address of volunteers.

So, now let's list what instances we are talking about.

1. Compute instance>VM>Linux machine, Debian ,Ubuntu>10GB persistent HD, 2 core.
2. Database>Cloud SQL>server, dual-core, 10GB

These are just examples, pieces of information required in pricing calculator may be more detailed. Now put these in the pricing calculator

So, I put all these selections in the price calculator which gives me an estimated monthly bill of $114.04 per month.



Here you see a 30% reduction due to sustained use in both products.

So, estimating price is very easy but you should know in detail all the items that could contribute to the total price.