ClOUD RUN

Cloud Run is a fully managed platform in Google Cloud Platform (GCP) that enables you to run your code directly on top of Google's scalable infrastructure. It's a compute platform that allows you to run stateless containers, which can be invoked viaPub/Sub events or web requests. It's serverless, which means it abstracts all the infrastructure management tasks so that you can focus on building great applications.

Cloud Run is a container-based tool that allows you to run your code directly on Google's infrastructure. You can achieve this using either Cloud Run Services or Cloud Run Jobs, depending on your requirements. With its numerous features and ease of use, Cloud Run enables developers to increase productivity and efficiency, all at a lower cost.

There are two ways to exploit the code on Cloud Run. With this option, you can leverage code that responds to a web request or an event. Here are some concrete examples of using this option:

Websites and web applications: You can build an app using all your usual tools, access a SQL database, and create dynamic HTML pages.

APIs and Microservices: With Cloud Run Services, you can design a RESTful, gRPC, or GraphQL API. These can be made public or private.

Streaming data processing: You can receive messages from Cloud Pub/Sub, requests from Cloud Tasks, and events.

Even though Cloud Run is a container-based solution, you can still use the source-based option. This allows you to create containers for yourself from the various languages you use.

Furthermore, Cloud Run allows you to integrate with all the tools of GCP. These integrations enable you to develop high-performance and complex applications.

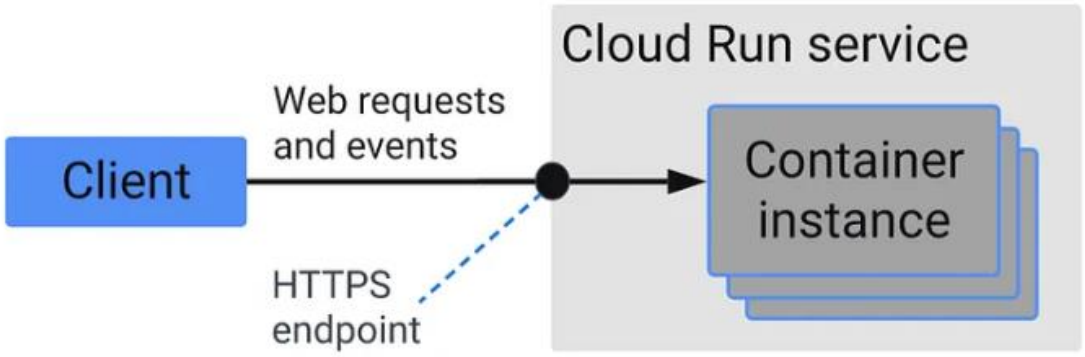
GCP Cloud Run primarily operates on the Free Tier principle. This means you pay based on what you use in terms of CPU and memory. So, you don’t spend any budget on Google Cloud Platform services if the capacity is inactive.

Services and jobs: two ways to run your code

On Cloud Run, your code can either run continuously as a *service* or as a *job*. Both services and jobs run in the same environment and can use the same integrations with other services on Google Cloud.

- **Cloud Run services.** Used to run code that responds to web requests, or events.
- **Cloud Run jobs.** Used to run code that performs work (a job) and quits when the work is done.

Cloud Run services:



A Cloud Run service provides you with the infrastructure required to run a reliable HTTPS endpoint. Your responsibility is to make sure your code listens on a TCP port and handles HTTP requests.