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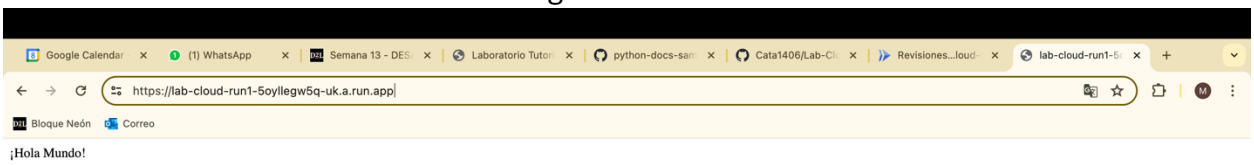
201922462

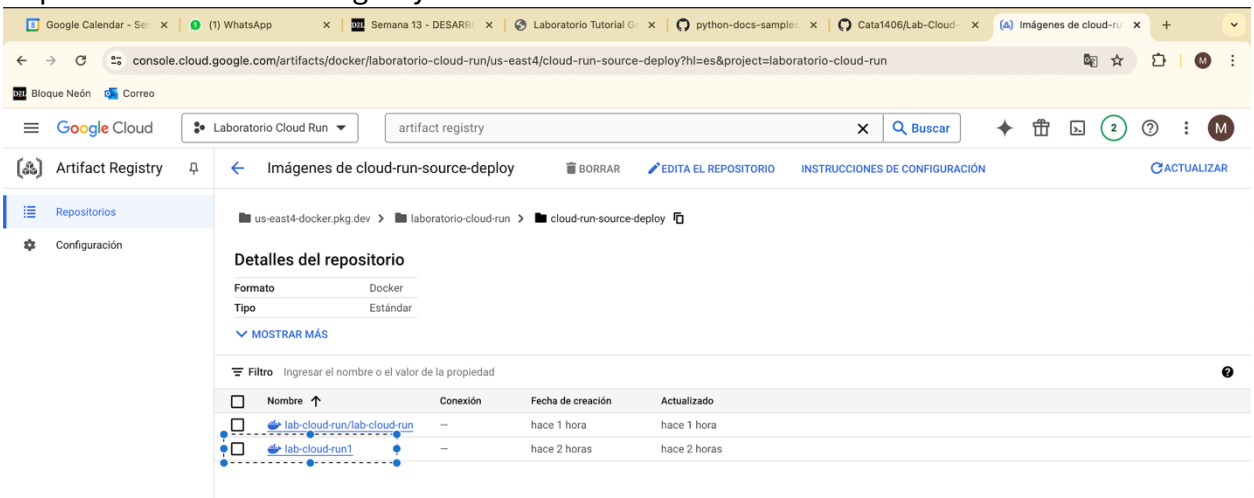
Laboratorio: Cloud Run

Tarea 1: Desplegar desde código fuente en terminal

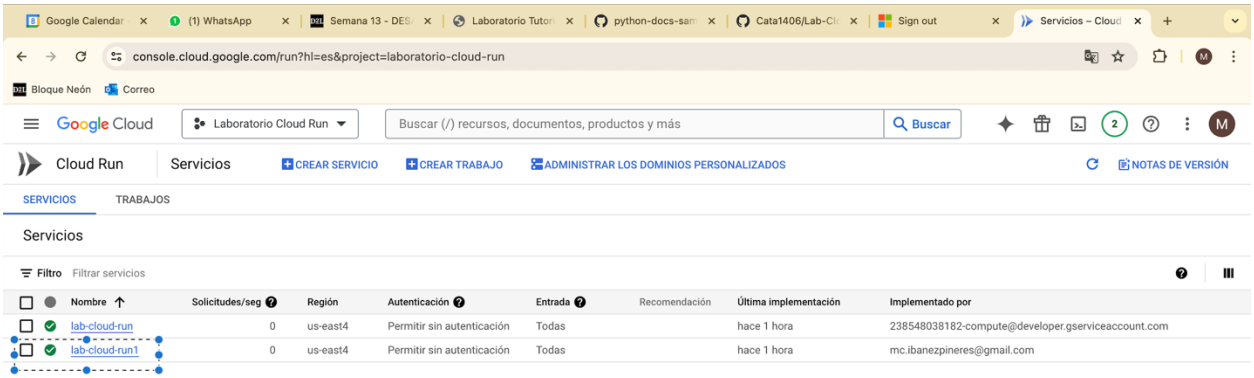
Cuando se accede al enlace en un navegador web:



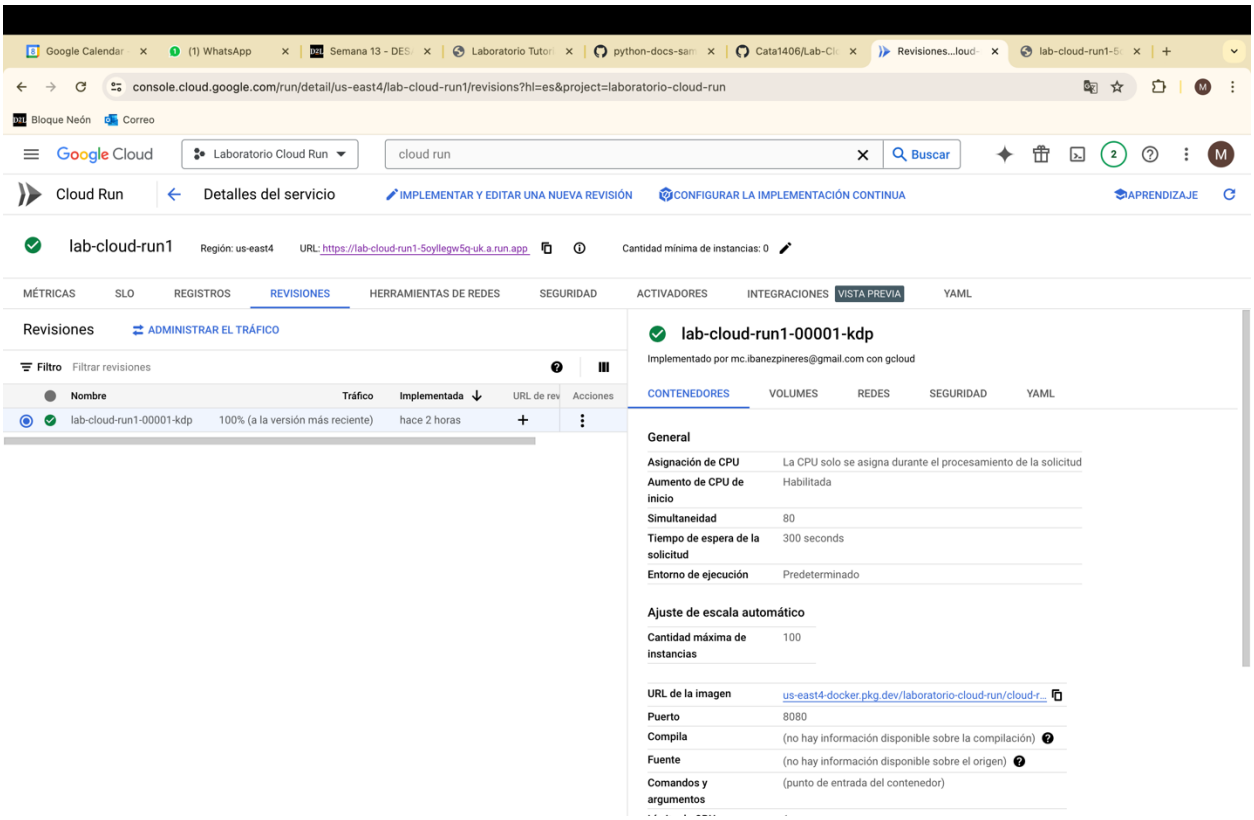
Repositorio en Artifact Registry:



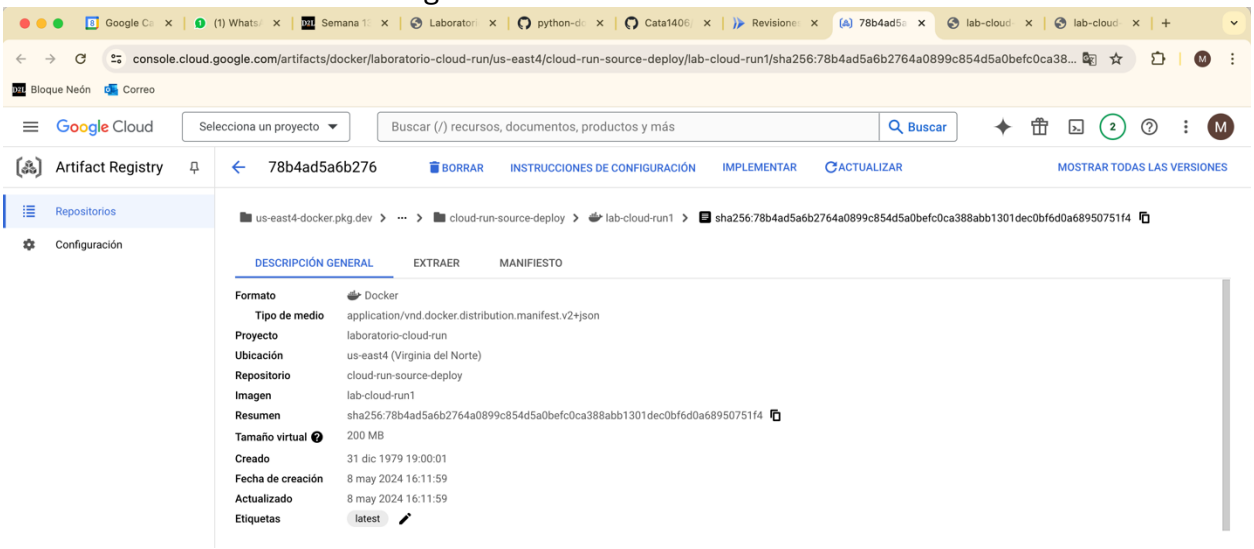
Servicio en Cloud Run



Detalle del servicio:



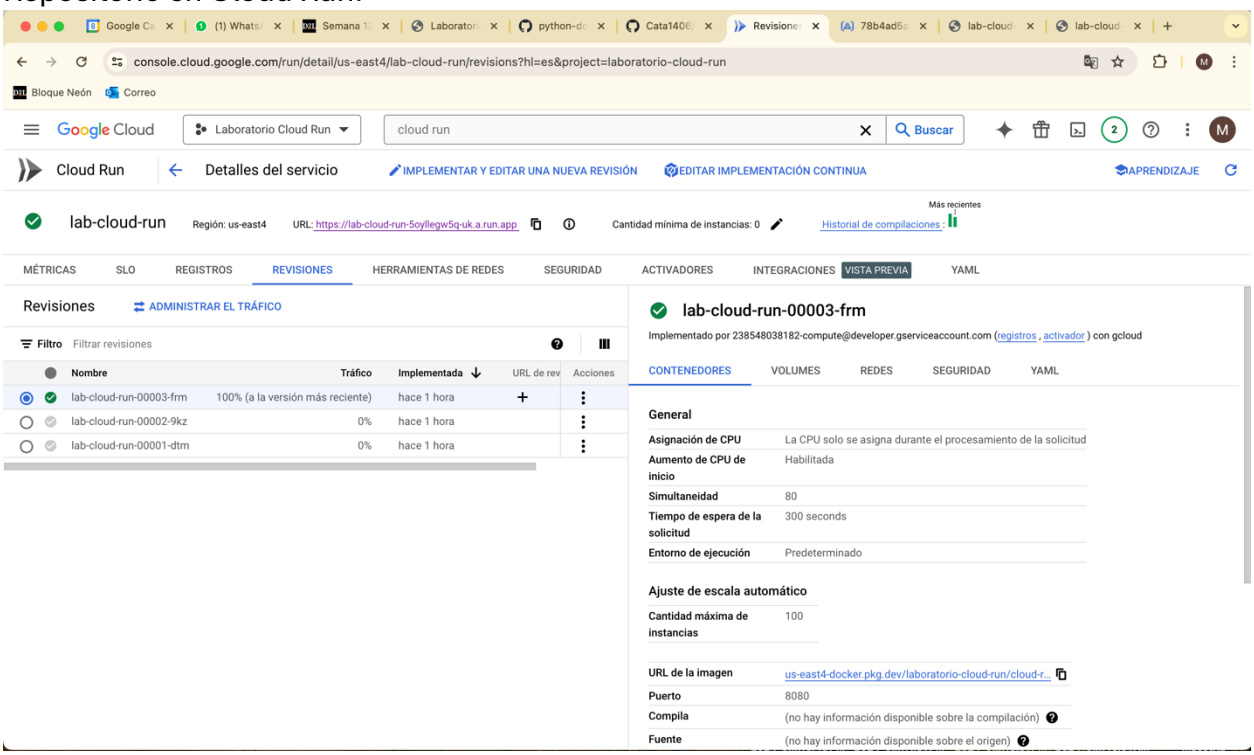
Si se le da clic al URL de la imagen:



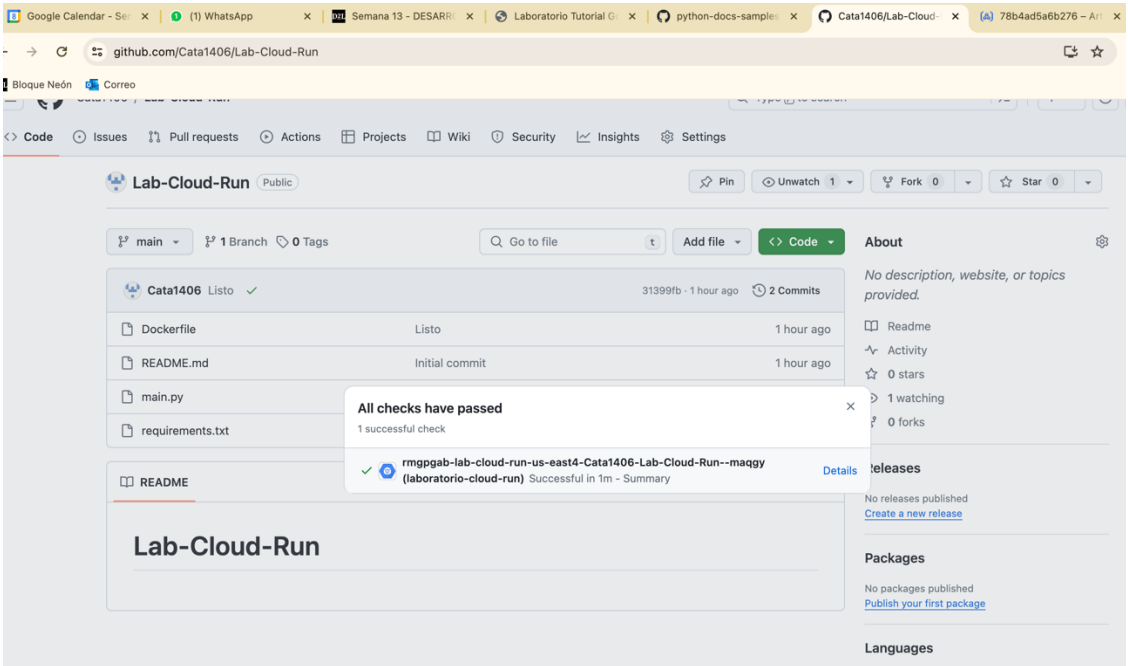
Tarea 2: Implementación continua desde git en consola

Link al repositorio de GitHub: https://github.com/Cata1406/Lab-Cloud-Run.git

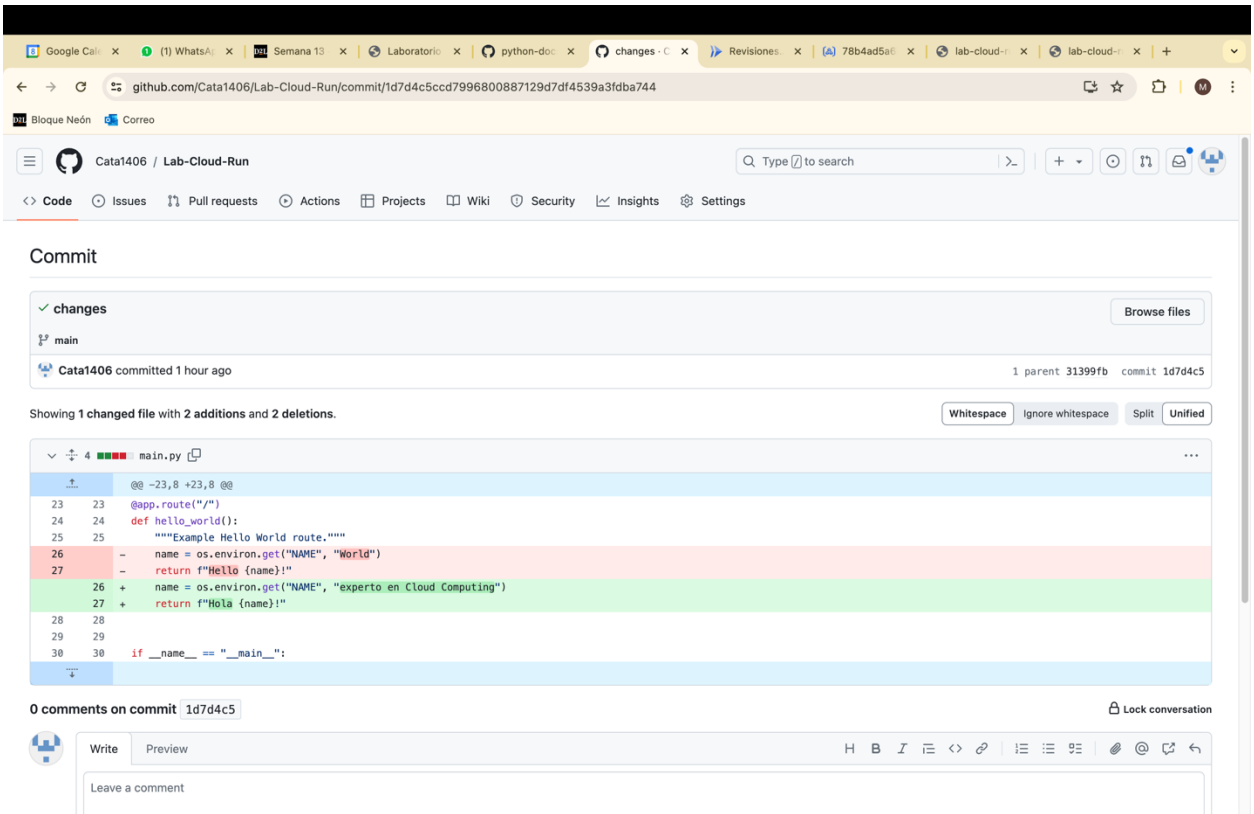
Repositorio en Cloud Run:



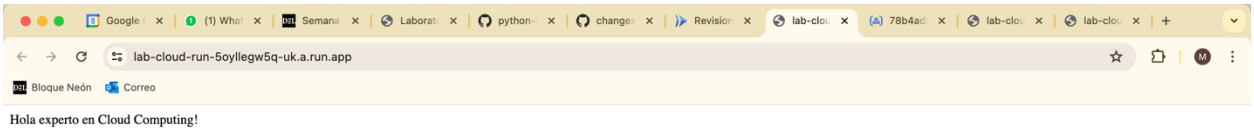
Estado de operación sobre el repositorio de GitHub



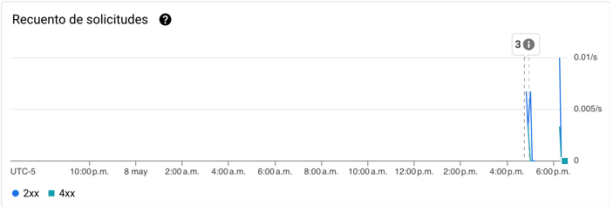
Cambios al repositorio:

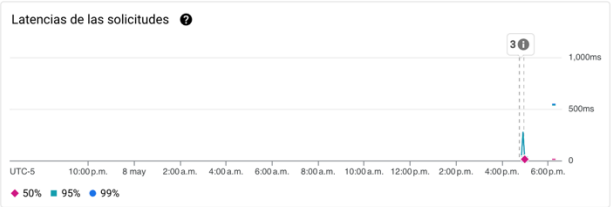


Si se accede al URL:



Métricas:





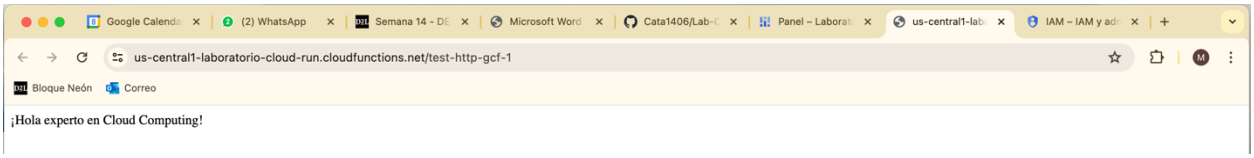
Laboratorio: implementar una función cloud (Cloud Function)

Tarea 1: Línea de comandos

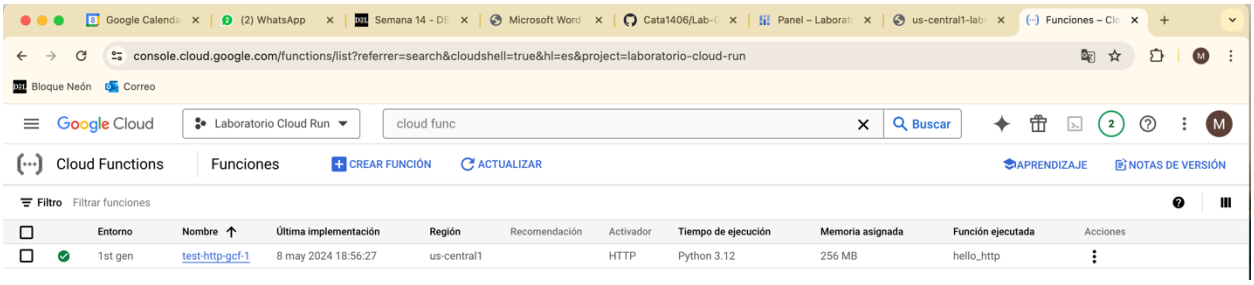
Resultado de desplegar la función en Google Cloud Functions:

```
mc_ibanezpineres@cloudshell:~/gcf_hello_http (laboratorio-cloud-run)$ gcloud functions deploy test-http-gcf-1  --runtime=python312  --source=.  --entry-point=hello_http  --trigger-http  -
llow-unauthenticated
In a future Cloud SDK release, new functions will be deployed as 2nd gen  functions by default. This is equivalent to currently deploying new  with the --gen2 flag. Existing 1st gen funct
ns will not be impacted and will continue to deploy as 1st gen functions.
You can preview this behavior in beta. Alternatively, you can disable this behavior by explicitly specifying the --no-gen2 flag or by setting the functions/gen2 config property to 'off'.
To learn more about the differences between 1st gen and 2nd gen functions, visit:
https://cloud.google.com/functions/docs/concepts/version-comparison
Deploying function (may take a while - up to 2 minutes)...working..
For Cloud Build Logs, visit: https://console.cloud.google.com/cloud-build/builds;region=us-central1/f3daf7a2-1e6f-434f-bf7e-af9807ae3390?project=238548038182
Deploying function (may take a while - up to 2 minutes)...done.
automaticUpdatePolicy: {}
availableMemoryMb: 256
buildId: f3daf7a2-1e6f-434f-bf7e-af9807ae3390
buildName: projects/238548038182/locations/us-central1/builds/f3daf7a2-1e6f-434f-bf7e-af9807ae3390
dockerRegistry: ARTIFACT_REGISTRY
entryPoint: hello_http
httpsTrigger:
  securityLevel: SECURE_ALWAYS
  url: https://us-central1-laboratorio-cloud-run.cloudfunctions.net/test-http-gcf-1
ingressSettings: ALLOW_ALL
labels:
  deployment-tool: cli-gcloud
name: projects/laboratorio-cloud-run/locations/us-central1/functions/test-http-gcf-1
runtime: python312
serviceAccountEmail: laboratorio-cloud-run@appspot.gserviceaccount.com
sourceUploadUrl: https://storage.googleapis.com/uploads-721850558323.us-central1.cloudfunctions.appspot.com/f9ecb328-86ce-4d15-bf35-f4d22dd63a34.zip
status: ACTIVE
timeout: 60s
updateTime: '2024-05-08T23:56:27.826Z'
versionId: '1'
```

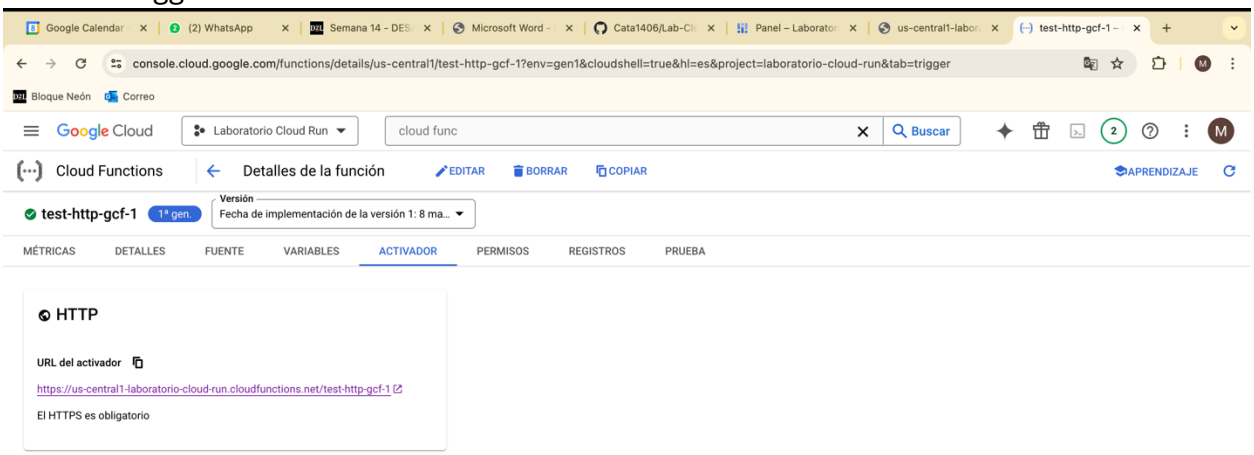
Si se entra a la URL:



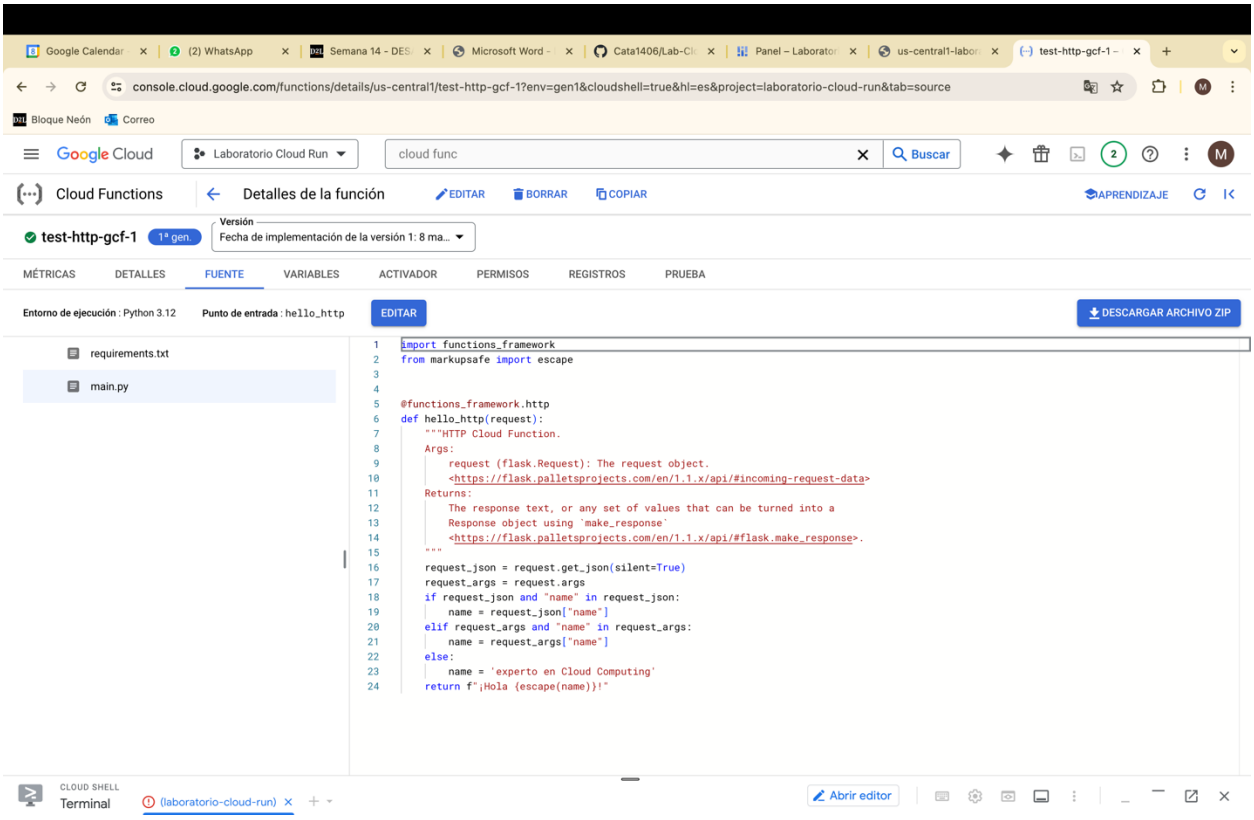
Función en Cloud Functions:



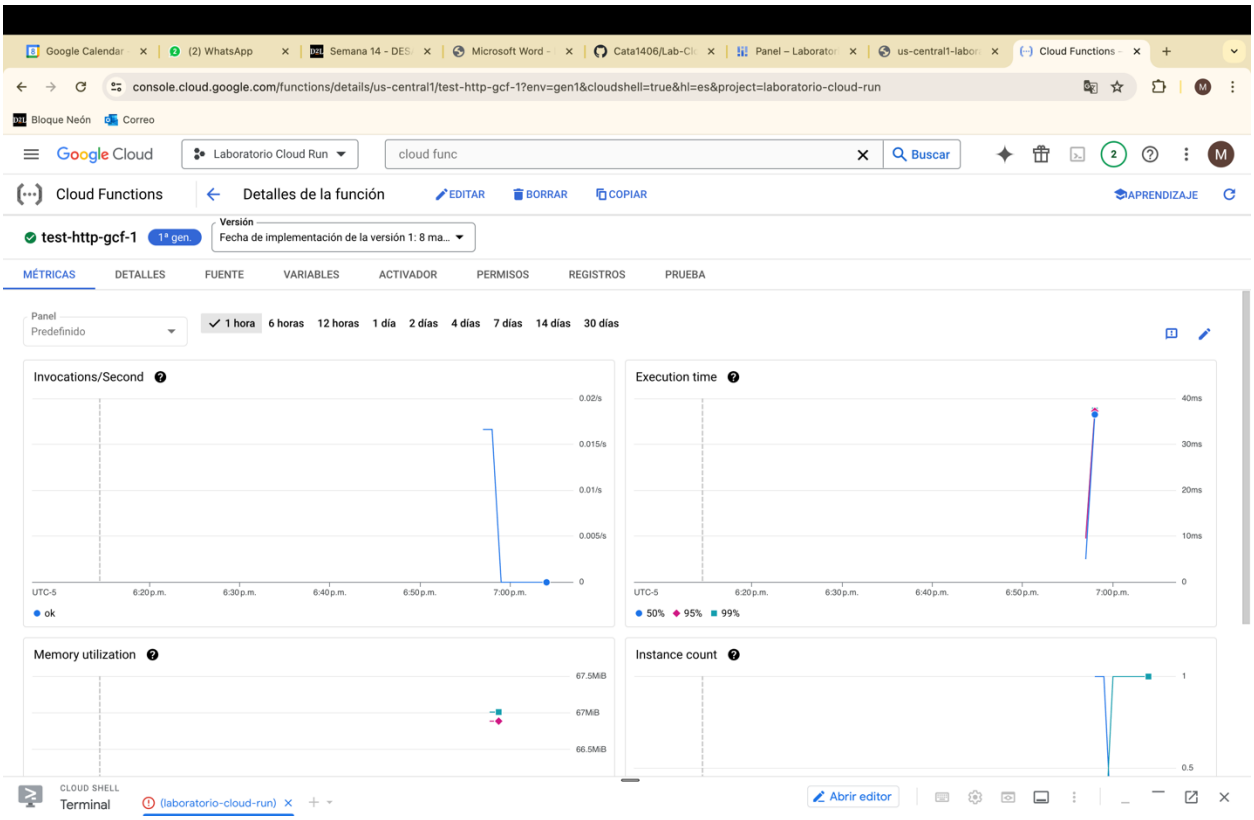
Pestaña Trigger:



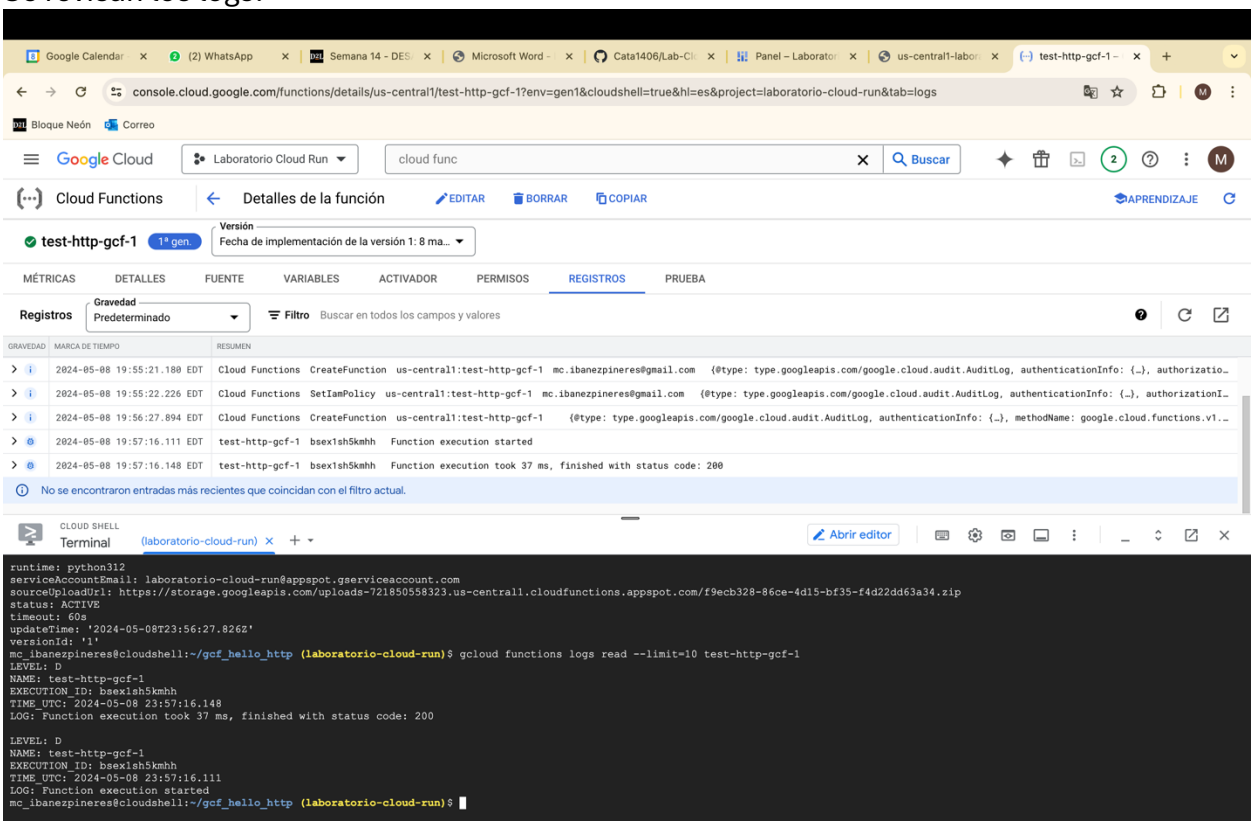
Pestaña Source:



Pestaña Metrics:

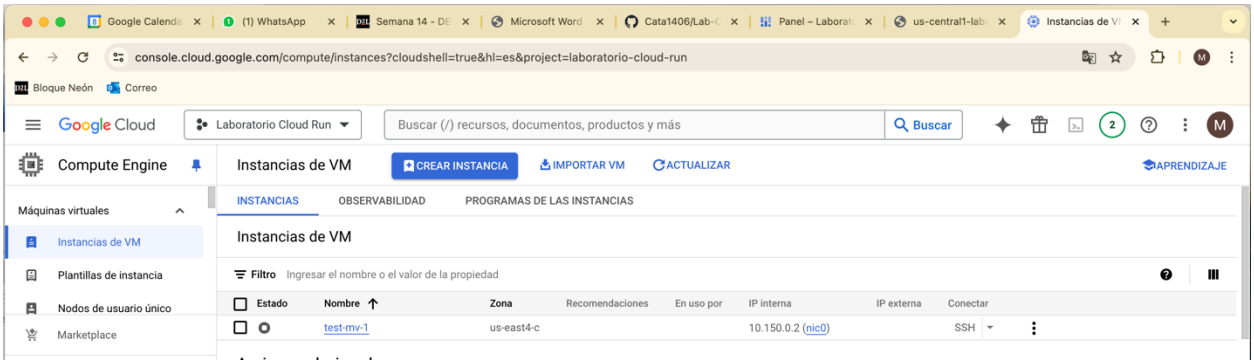


Se revisan los logs:

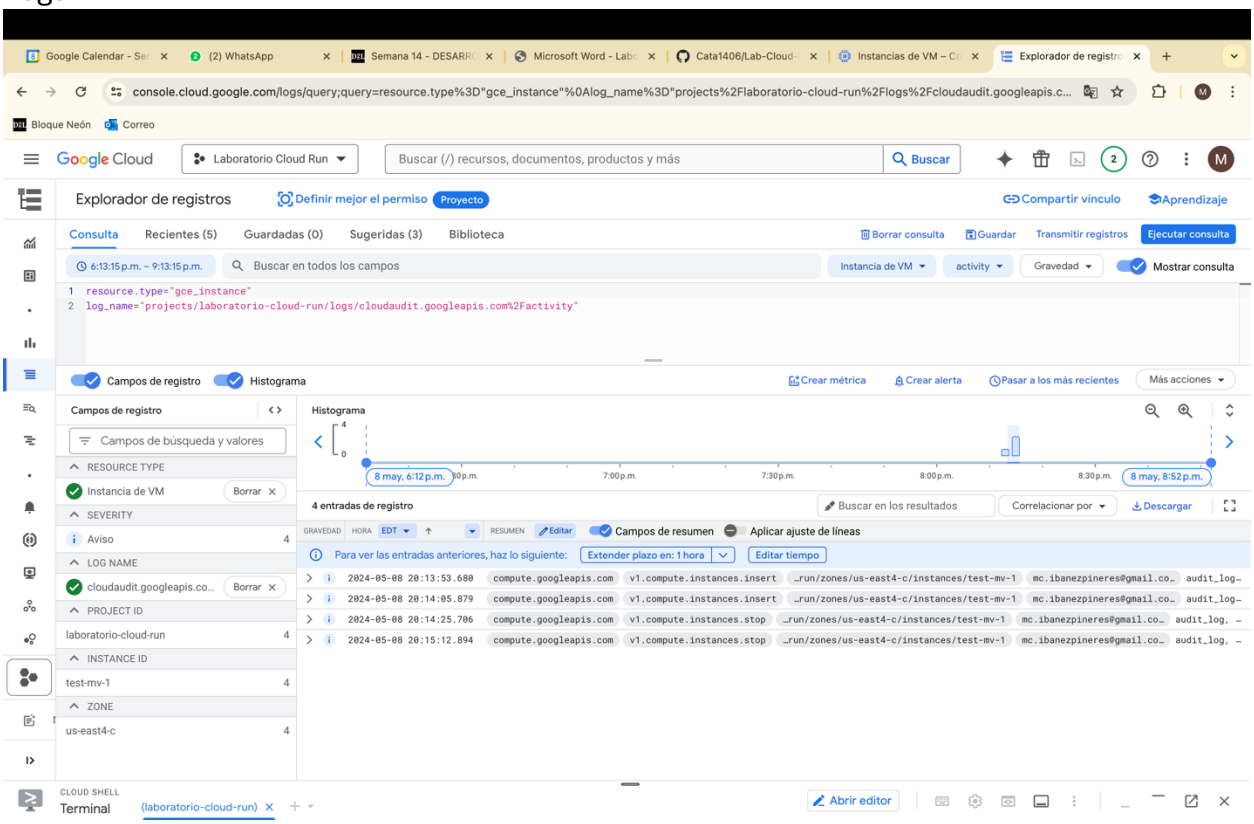


Tarea 2: Respondiendo a mensajes de Cloud Logging con Cloud Function

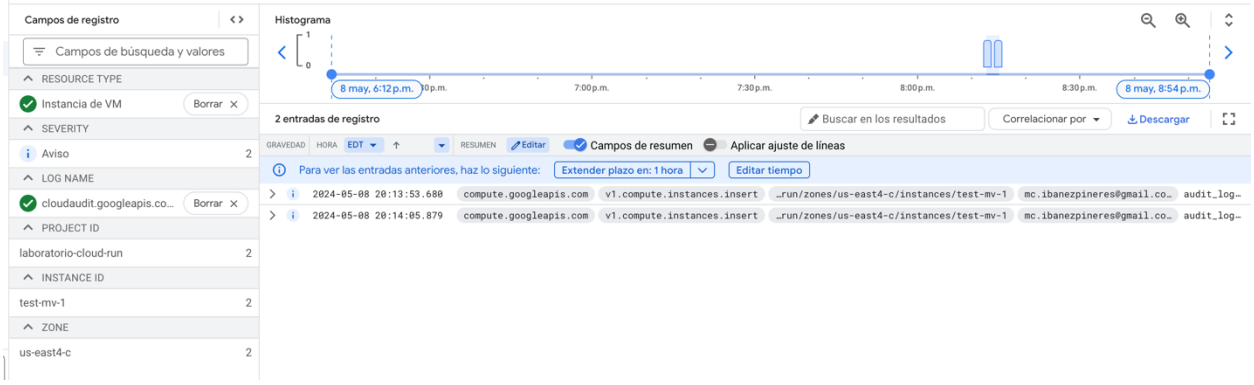
Estado de la instancia recién creada:



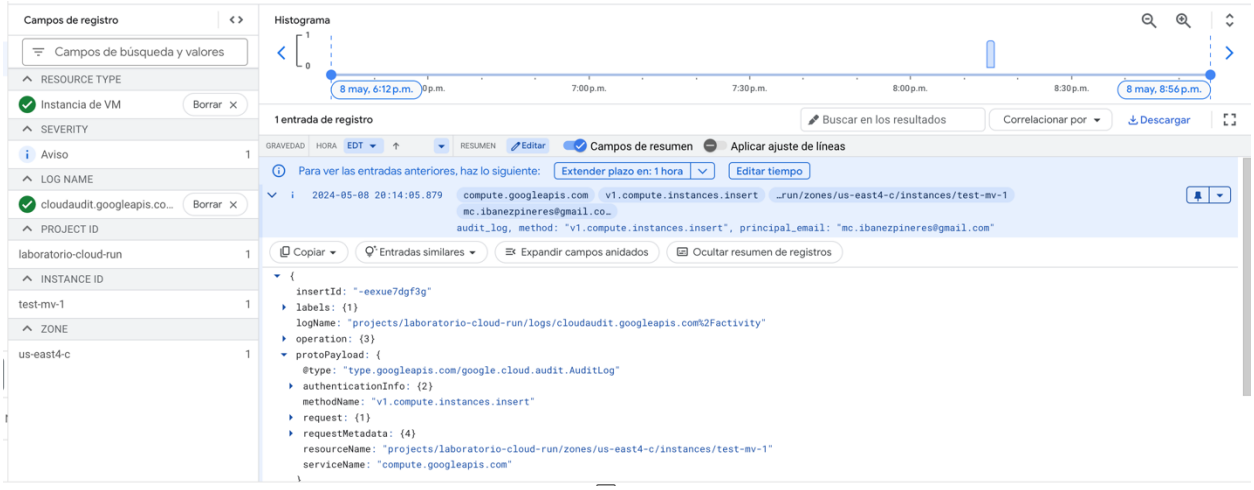
Logs:



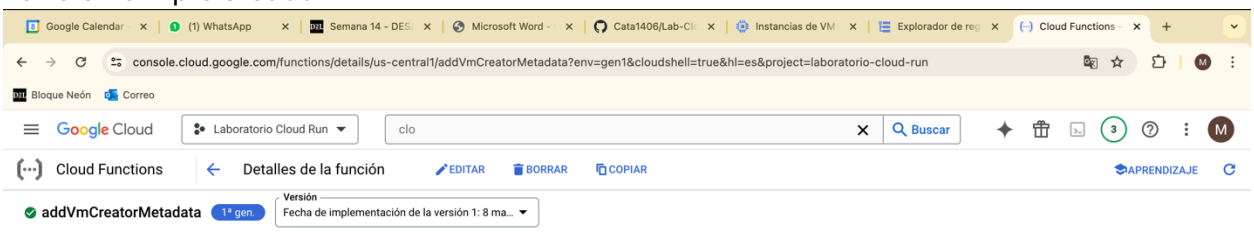
Consulta solo para operaciones insert:



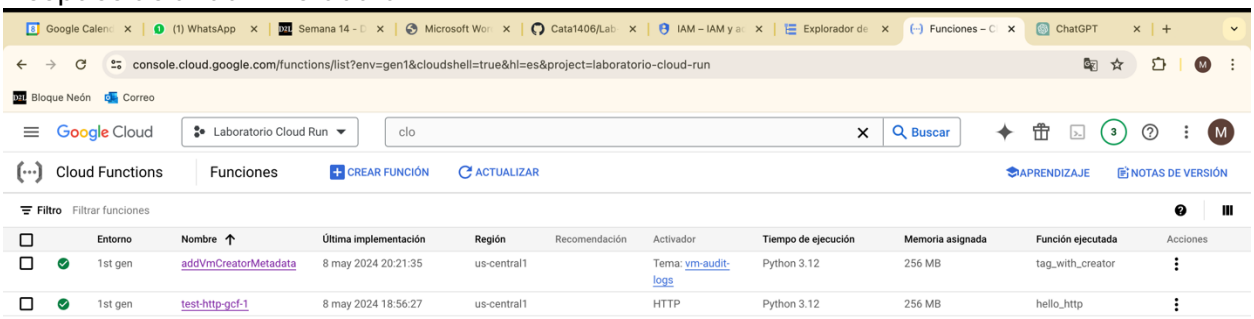
Después de aplicar el filtro en operation (last: True):



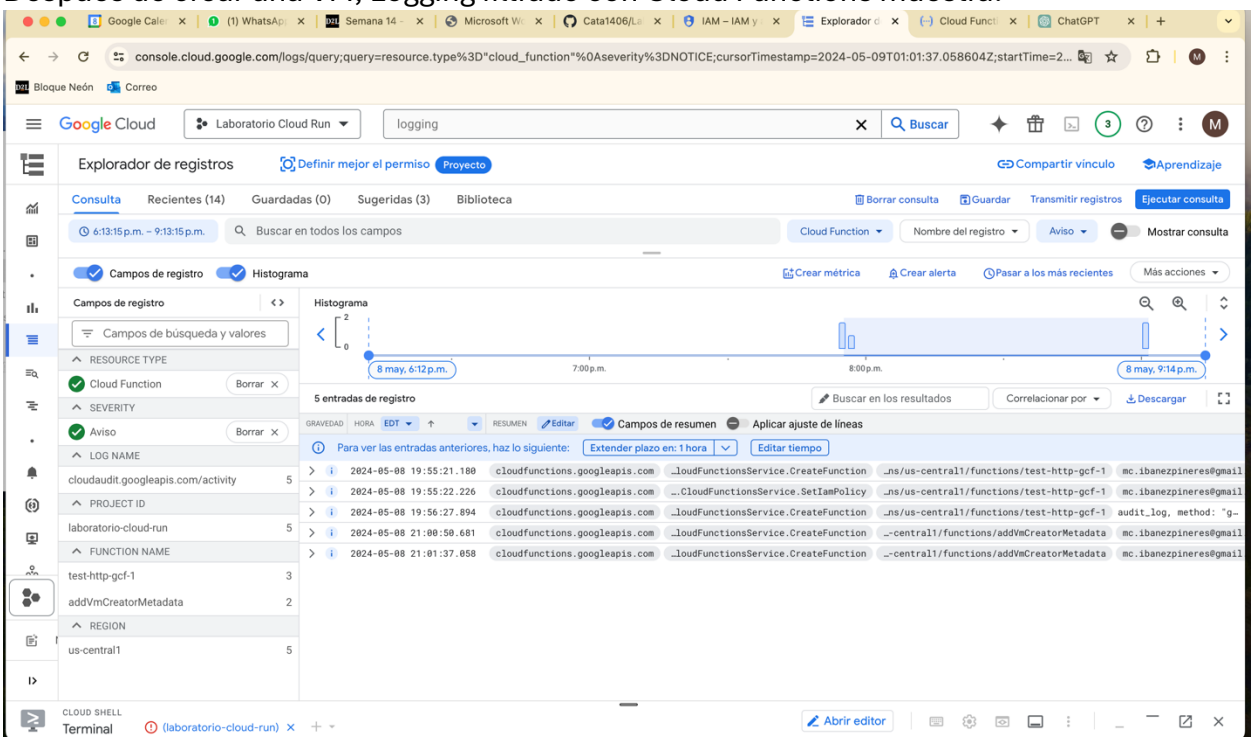
Función simple creada:



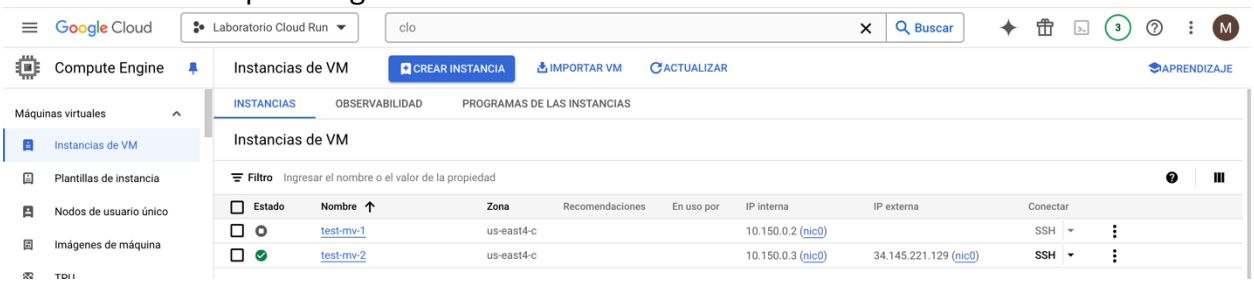
Después de añadir metadata:



Después de crear una VM, Logging filtrado con Cloud Functions muestra:



Instancia en Compute Engine:



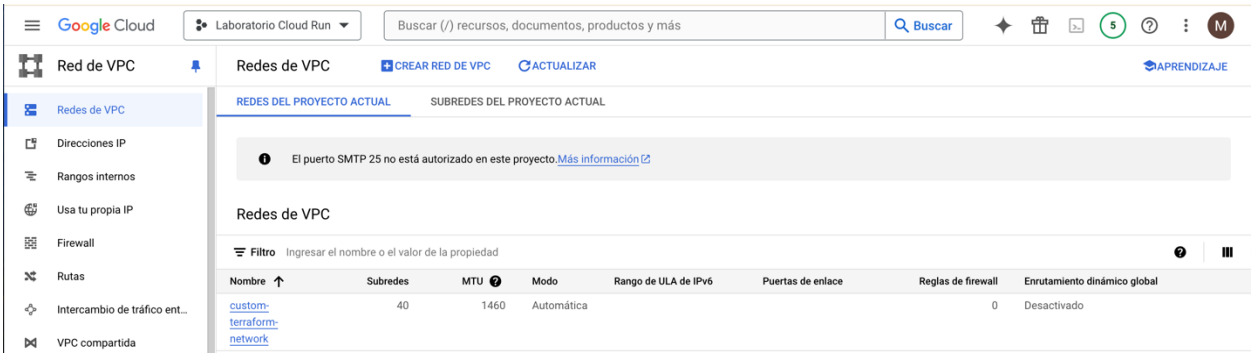
Laboratorio: Terraform en GCP

Tarea 1: Construir

Después de generar y presentar el plan de ejecución:

```
mc_ibanezpineres@cloudshell:~/learn-terraform-gcp (laboratorio-cloud-run)$ terraform plan

Terraform used the selected providers to generate the following execution plan. Resource actions are indicated with the following symbols:
  + create

Terraform will perform the following actions:

  # google_compute_network.vpc_network will be created
  + resource "google_compute_network" "vpc_network" {
      + auto_create_subnetworks                   = true
      + delete_default_routes_on_create           = false
      + gateway_ipv4                              = (known after apply)
      + id                                        = (known after apply)
      + internal_ipv6_range                       = (known after apply)
      + mtu                                       = (known after apply)
      + name                                      = "custom-terraform-network"
      + network_firewall_policy_enforcement_order = "AFTER_CLASSIC_FIREWALL"
      + numeric_id                                = (known after apply)
      + project                                   = "<PROJECT_ID>"
      + routing_mode                              = (known after apply)
      + self_link                                 = (known after apply)
    }

Plan: 1 to add, 0 to change, 0 to destroy.


Note: You didn't use the -out option to save this plan, so Terraform can't guarantee to take exactly these actions if you run "terraform apply" now.
```

Red de VPC:



Tarea 2: Modificar

Instancia de VM creada después de aplicar el comando terraform apply:

Interfaces de red

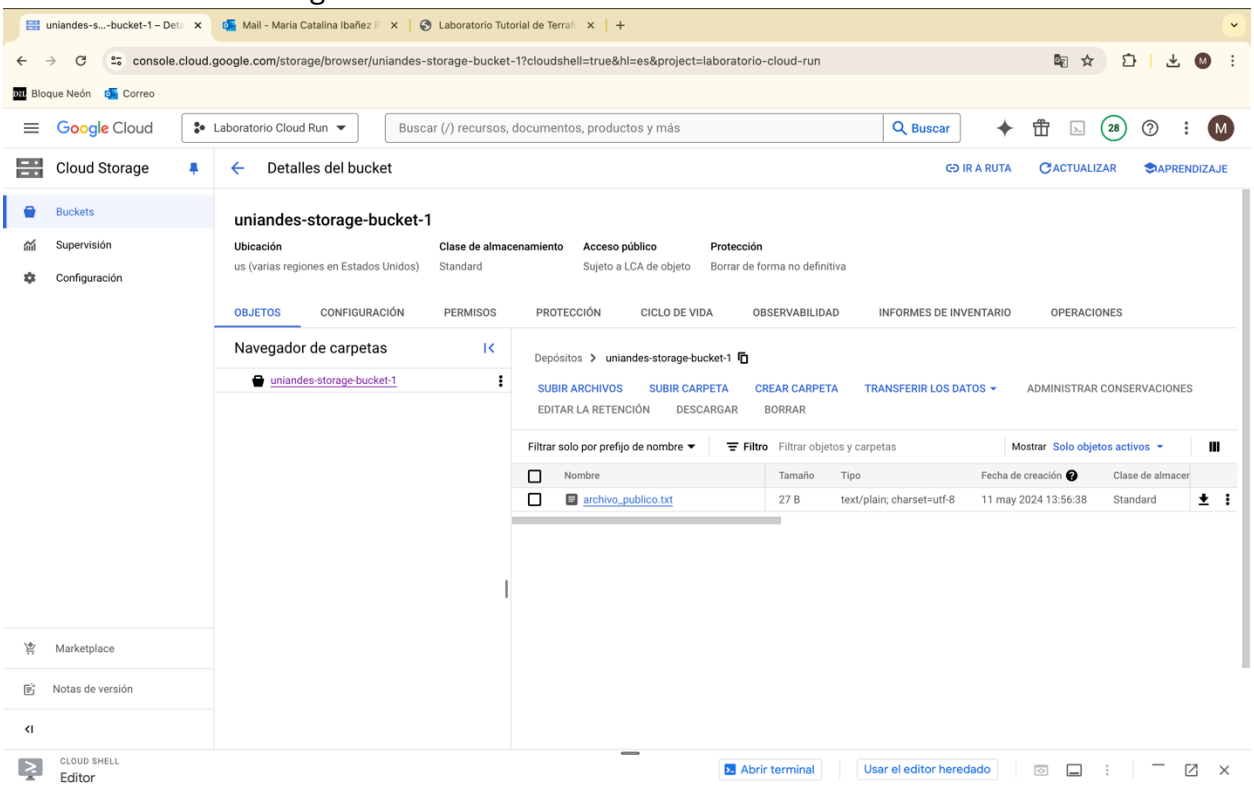
Nombre	Red	Subred	Dirección IP interna principal	Rangos de alias de IP	Tipo de pila de IP	Dirección IP externa	N
nic0	custom-terraform-network	custom-terraform-network	10.128.0.2		IPv4	35.184.142.52 (Efímera)	F

Almacenamiento

Disco de arranque

Nombre	Imagen	Tipo de interfaz	Tamaño (GB)	Nombre del dispositivo	Tipo	Arquitectura	Encriptación
terraform-instance-1	debian-11-bullseye-v20240415	SCSI	10	persistent-disk-0	Disco persistente estándar	x86-64	Administrada por Google

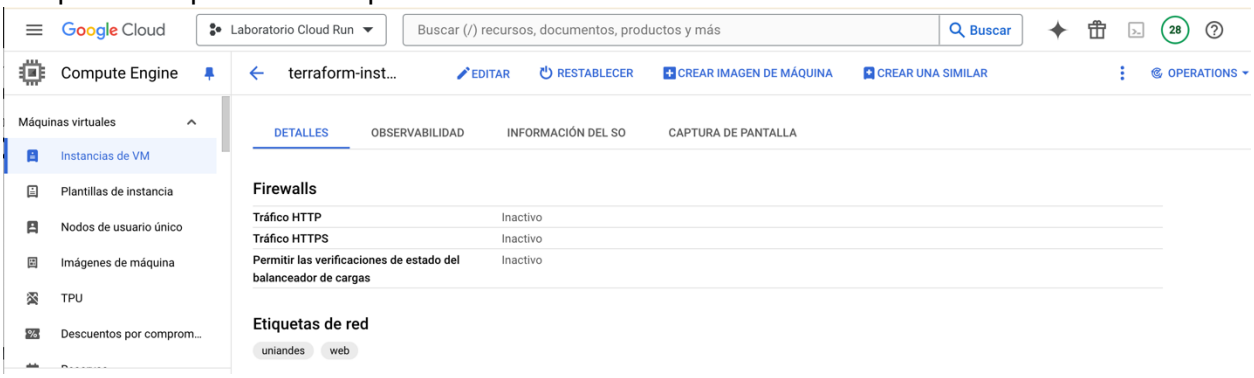
Bucket en Cloud Storage:



Después de aplicar terraform apply para crear el objeto del archivo file.txt y cargarlo en el bucket:

```
mc_ibanezpineres@cloudshell:~/learn-terraform-gcp (laboratorio-cloud-run)$ terraform apply
google_compute_network.vpc_network: Refreshing state... [id=projects/laboratorio-cloud-run/global/networks/custom-terraform-network]
google_storage_bucket.app_bucket: Refreshing state... [id=uniandes-storage-bucket-1]
google_storage_bucket_object.objeto_publico: Refreshing state... [id=uniandes-storage-bucket-1-archivo_publico.txt]
google_storage_object_access_control.public_rule: Refreshing state... [id=uniandes-storage-bucket-1/archivo_publico.txt/allUsers]
google_compute_instance.vm_instance: Refreshing state... [id=projects/laboratorio-cloud-run/zones/us-central1-a/instances/terraform-instance-1]

Terraform used the selected providers to generate the following execution plan. Resource actions are indicated with the following symbols:
  + create

Terraform will perform the following actions:

  # google_storage_bucket_object.new_txt_file will be created
  + resource "google_storage_bucket_object" "new_txt_file" {
      + bucket         = "uniandes-storage-bucket-1"
      + content        = (sensitive value)
      + content_type   = (known after apply)
      + crc32c         = (known after apply)
      + detect_md5hash = "different hash"
      + id             = (known after apply)
      + kms_key_name   = (known after apply)
      + md5hash        = (known after apply)
      + media_link     = (known after apply)
      + name           = "file.txt"
      + output_name    = (known after apply)
      + self_link      = (known after apply)
      + source         = "files/file.txt"
      + storage_class  = (known after apply)
    }

Plan: 1 to add, 0 to change, 0 to destroy.

Do you want to perform these actions?
  Terraform will perform the actions described above.
  Only 'yes' will be accepted to approve.

  Enter a value: yes

google_storage_bucket_object.new_txt_file: Creating...
google_storage_bucket_object.new_txt_file: Creation complete after 0s [id=uniandes-storage-bucket-1-file.txt]

Apply complete! Resources: 1 added, 0 changed, 0 destroyed.
```

Después de aplicar las etiquetas de red:



VM luego de cambiar el disco de arranque:

Disco de arranque

Nombre	Imagen	Tipo de interfaz	Tamaño (GB)	Nombre del dispositivo	Tipo	Arquitectura	Encriptación
terraform-instance-1	cos-stable-113-18244-1-65	SCSI	10	persistent-disk-0	Disco persistente estándar	x86-64	Administrada por Google

Tarea 3: Destruir

Después de aplicar el comando terraform destroy

Instancias de VM

CREAR INSTANCIA | IMPORTAR VM | ACTUALIZAR

INSTANCIAS | OBSERVABILIDAD | PROGRAMAS DE LAS INSTANCIAS

Instancias de VM

Filtro Ingresar el nombre o el valor de la propiedad

Estado	Nombre	Zona	Recomendaciones	En uso por	IP interna	IP externa	Conectar

Buckets

CREAR | ACTUALIZAR | IR A RUTA | APRE

A partir del 29 de abril de 2024, el análisis de políticas a gran escala y las capacidades avanzadas de recomendación de IAM requerirán una suscripción a Security Command Center Premiu
información

DESCARTAR

Filtro Filtrar depósitos

Nombre	Fecha de creación	Tipo de ubicación	Ubicación	Clase de almacenamiento predeterminada	Última modificac
gcf-sources-238548038182-us-central1	8 may 2024 18:55:22	Region	us-central1	Standard	8 may 2024 18:
laboratorio-cloud-run_cloudbuild	8 may 2024 16:10:27	Multi-region	us	Standard	8 may 2024 16:

Redes de VPC

Filtro Ingresar el nombre o el valor de la propiedad

Nombre	Subredes	MTU	Modo	Rango de ULA de IPv6	Puertas de enlace	Reglas de firewall	Enrutamiento dinámico global
default	42	1460	Automática			4	Desactivado