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# Cloud Run Functions: Qwik Start - Console

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## Objective

The objective of this lab is to:

- Create, deploy, and test a **Cloud Run function** using the Google Cloud Console.
- Understand **serverless, event-driven execution** on Google Cloud.
- Learn to view and analyze **logs** for deployed functions.

## Introduction

**Cloud Run functions** allow you to run your code in response to **events** (HTTP requests, Pub/Sub messages, file uploads) in a **fully managed serverless environment**. They help build **scalable microservices** without managing server infrastructure, scaling automatically as needed.

## Tools and Environment

- **Platform:** Google Cloud Console
- **Service:** Cloud Run
- **Language:** Node.js (default helloHttp function)
- **Browser:** Chrome (Incognito Mode)
- **Lab Environment:** Qwiklabs temporary student account

## Task 1. Create a function

In this step, you're going to create a Cloud Run function using the console.

1. In the console, on the **Navigation menu** (≡) click **Cloud Run**.
2. Click **WRITE A FUNCTION**.
3. In the **function** dialog, enter the following values

Field	Value
Service name	gcfunction
Region	REGION

Authentication	Allow unauthenticated invocations
Memory allocated (In Container(s), Volumes and Security Settings)	Keep default
Execution environment (In Container(s), Volumes and Security Settings)	Second generation
Revision scaling (In Container(s), Volumes and Security Settings)	Set the <b>Maximum number of instance</b> to <b>5</b> , and then click <b>Create</b>

## Task 2. Deploy the function

1. Still in the **Create function** dialog, in Source code for **Inline editor** use the default helloHttp function implementation already provided for index.js.
2. Click **SAVE and REDEPLOY** to deploy the function.

## Task 3. Test the function

Test the deployed function.

1. On the function details dashboard, to test the function click **TEST**.

The screenshot shows the Cloud Run service details page. At the top, there are tabs for 'Cloud Run' (selected), 'Service details', 'EDIT & DEPLOY NEW REVISION', 'SET UP CONTINUOUS DEPLOYMENT', and a redboxed 'TEST' button. Below this, it says 'Deploying revision' with a 'HIDE STATUS' link. A table lists deployment steps: 'Building source (see logs)' (Completed), 'Updating service' (Completed), 'Creating revision' (Completed), and 'Routing traffic' (Completed). At the bottom, it shows the service name 'gcfunction', region 'us-west1', URL 'https://gcfunction-1038470885270.us-west1.run.app', and scaling settings ('Scaling: Auto (Min: 0)').

1. In the Triggering event field, enter the following text between the brackets {} .

"message":"Hello World!"

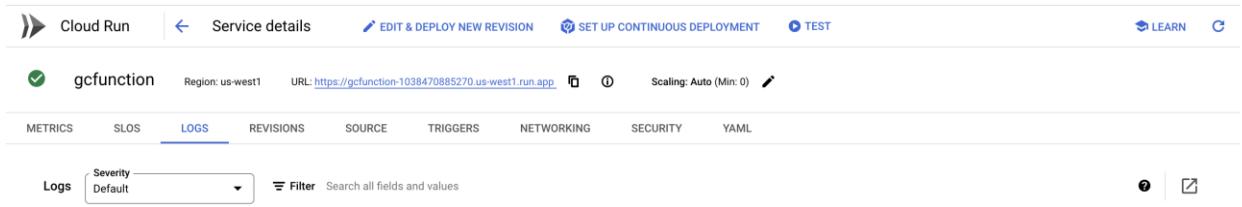
1. Copy the **CLI test command** and run it in the cloud shell.
2. You will see the "Hello World!" message as the output.

```
'student_01_c97d9fa0d52e@cloudshell:~ (gwiklabs-gcp-03-4a912731ab89)$ curl -X POST https://gcfunction-1038470885270.us-west1.run.app \
-H "Authorization: bearer $(gcloud auth print-identity-token)" \
-H "Content-Type: application/json" \
-d '{
  "message": "Hello World!"
}'
Hello World!student_01_c97d9fa0d52e@cloudshell:~ (gwiklabs-gcp-03-4a912731ab89)$'
```

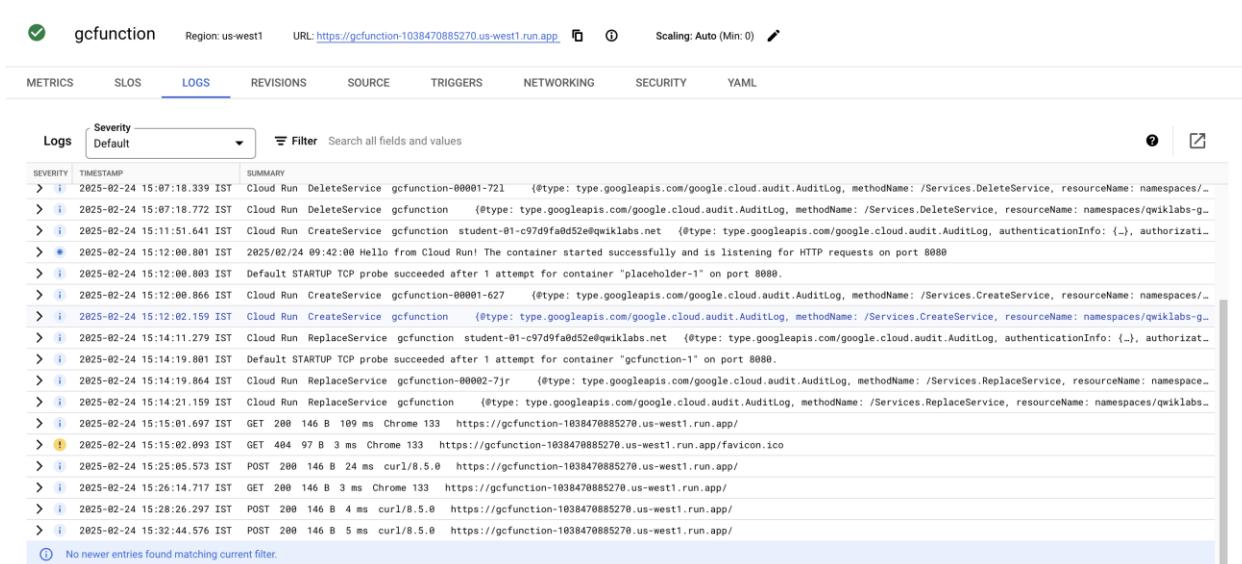
## Task 4. View logs

View logs from the service details page.

### 1. On the **Service Details Overview** page click **Logs** tab



Example of the log history that displays in **Results**:



SEVERITY	TIMESTAMP	SUMMARY
> i	2025-02-24 15:07:18.339 IST	Cloud Run DeleteService gfunction-00001-721 (@type: type.googleapis.com/google.cloud.audit.AuditLog, methodName: /Services.DeleteService, resourceName: namespaces/_)
> i	2025-02-24 15:07:18.772 IST	Cloud Run DeleteService gfunction (@type: type.googleapis.com/google.cloud.audit.AuditLog, methodName: /Services.DeleteService, resourceName: namespaces/qwiklabs-g_)
> i	2025-02-24 15:11:51.641 IST	Cloud Run CreateService gfunction student-01-c97df9fa0d52e@qwiklabs.net (@type: type.googleapis.com/google.cloud.audit.AuditLog, authenticationInfo: {}, authorizationInfo: {})
> i	2025-02-24 15:12:00.801 IST	2025/02/24 09:42:00 Hello from Cloud Run! The container started successfully and is listening for HTTP requests on port 8080
> i	2025-02-24 15:12:00.883 IST	Default STARTUP TCP probe succeeded after 1 attempt for container "placeholder-1" on port 8080.
> i	2025-02-24 15:12:08.866 IST	Cloud Run CreateService gfunction-00001-527 (@type: type.googleapis.com/google.cloud.audit.AuditLog, methodName: /Services.CreateService, resourceName: namespaces/_)
> i	2025-02-24 15:12:09.159 IST	Cloud Run CreateService gfunction (@type: type.googleapis.com/google.cloud.audit.AuditLog, methodName: /Services.CreateService, resourceName: namespaces/qwiklabs-g_)
> i	2025-02-24 15:14:11.279 IST	Cloud Run ReplaceService gfunction student-01-c97df9fa0d52e@qwiklabs.net (@type: type.googleapis.com/google.cloud.audit.AuditLog, authenticationInfo: {}, authorizationInfo: {})
> i	2025-02-24 15:14:19.881 IST	Default STARTUP TCP probe succeeded after 1 attempt for container "gfunction-1" on port 8080.
> i	2025-02-24 15:14:19.864 IST	Cloud Run ReplaceService gfunction-00002-7jr (@type: type.googleapis.com/google.cloud.audit.AuditLog, methodName: /Services.ReplaceService, resourceName: namespaces/_)
> i	2025-02-24 15:14:21.159 IST	Cloud Run ReplaceService gfunction (@type: type.googleapis.com/google.cloud.audit.AuditLog, methodName: /Services.ReplaceService, resourceName: namespaces/qwiklabs_)
> i	2025-02-24 15:15:02.693 IST	GET 200 146 B 109 ms Chrome 133 https://gfunction-1038470885270.us-west1.run.app/
> i	2025-02-24 15:15:02.693 IST	GET 404 97 B 3 ms Chrome 133 https://gfunction-1038470885270.us-west1.run.app/favicon.ico
> i	2025-02-24 15:25:05.573 IST	POST 200 146 B 24 ms curl/8.5.0 https://gfunction-1038470885270.us-west1.run.app/
> i	2025-02-24 15:26:14.717 IST	GET 200 146 B 3 ms Chrome 133 https://gfunction-1038470885270.us-west1.run.app/
> i	2025-02-24 15:28:26.297 IST	POST 200 146 B 4 ms curl/8.5.0 https://gfunction-1038470885270.us-west1.run.app/
> i	2025-02-24 15:32:44.576 IST	POST 200 146 B 5 ms curl/8.5.0 https://gfunction-1038470885270.us-west1.run.app/

## Observations

- Cloud Run automatically **scales up or down based on incoming requests**.
- No server management is required; only **code needs to be managed**.
- Functions can be tested directly in the console, making it easy to debug.
- Logs provide clear insights into request handling and function behavior.

## Conclusion

Through this lab, I learned how to:

- Create a Cloud Run function using the console.
- Deploy and test the function with a simple HTTP event.
- View and interpret logs for deployed functions.

This exercise strengthened my understanding of **serverless architecture and event-driven programming** in Google Cloud, which is essential for building scalable, cost-effective microservices in cloud environments.