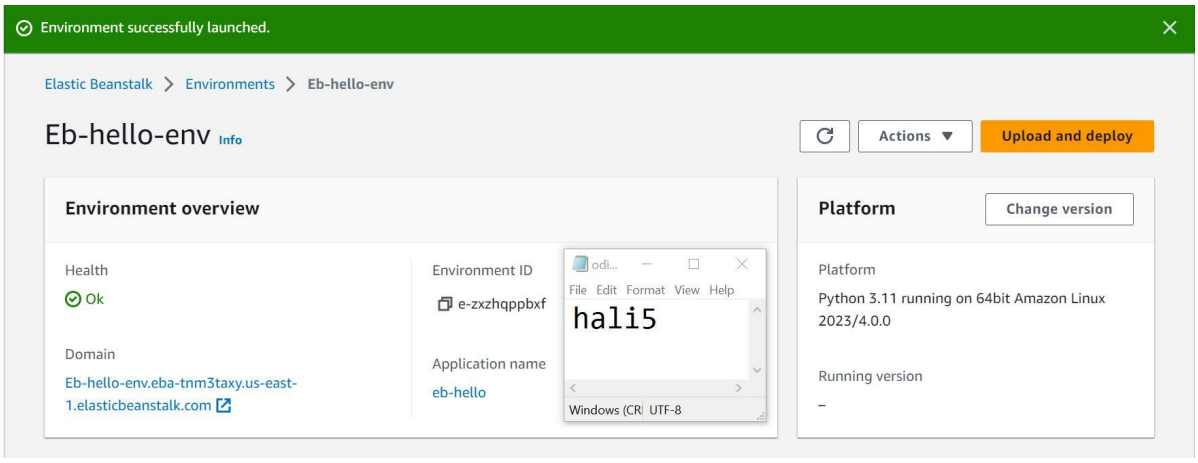
06.1a: EB Guestbook

Running the application

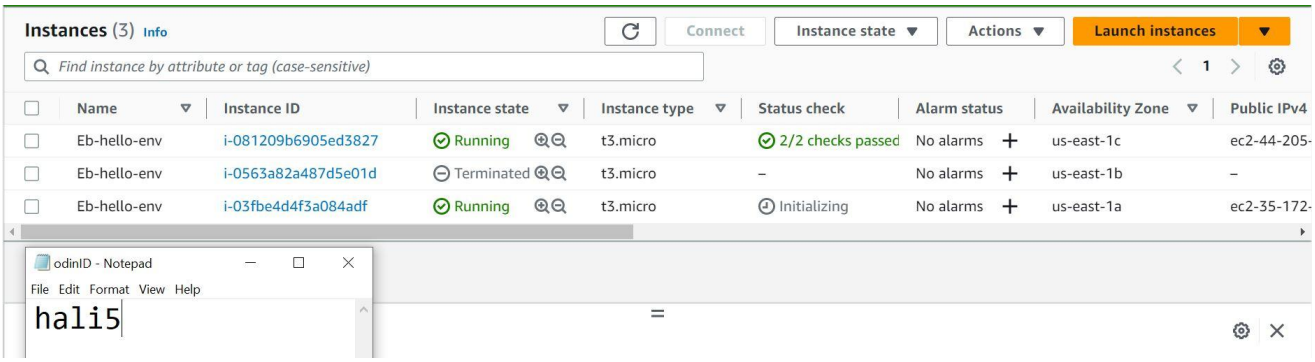
Take a screenshot showing it has been brought up successfully

\



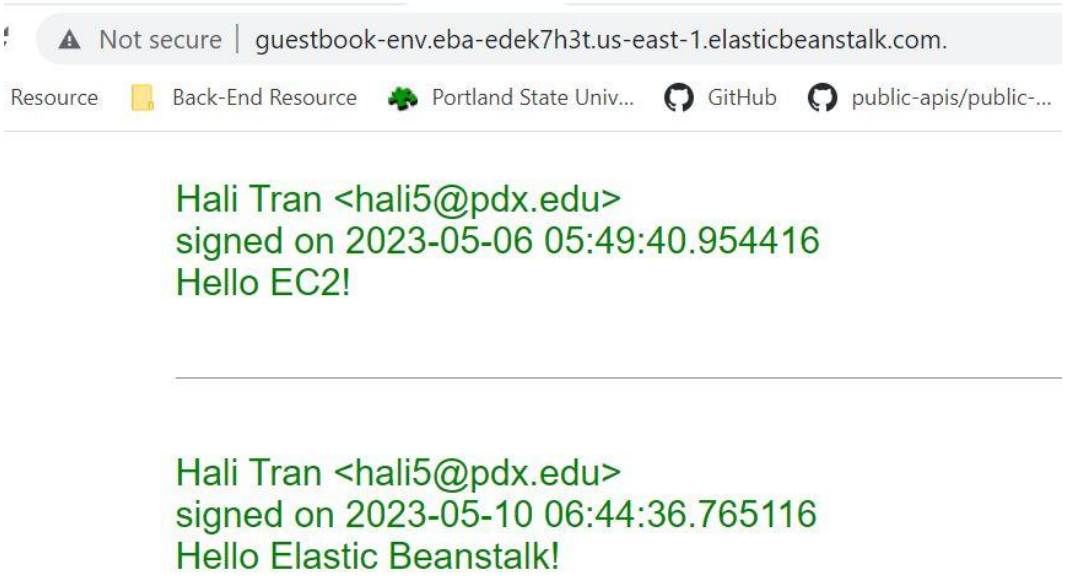
Handling failures seamlessly

Take a screenshot of the replacement VM being started

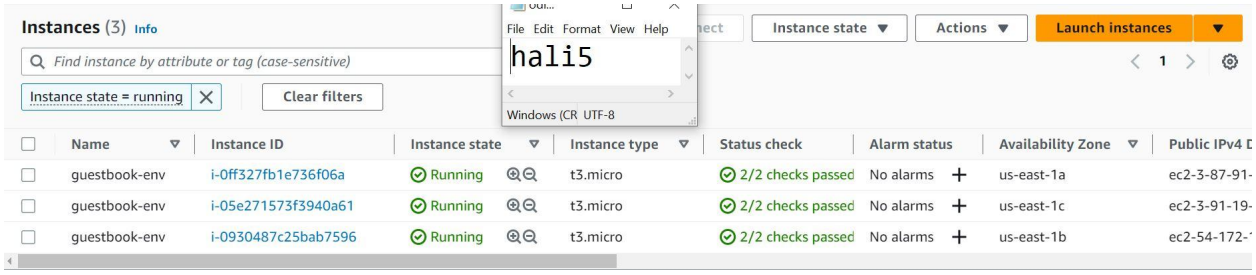


Deploying the Guestbook

Take a screenshot of the Guestbook including the URL with the entry in it.



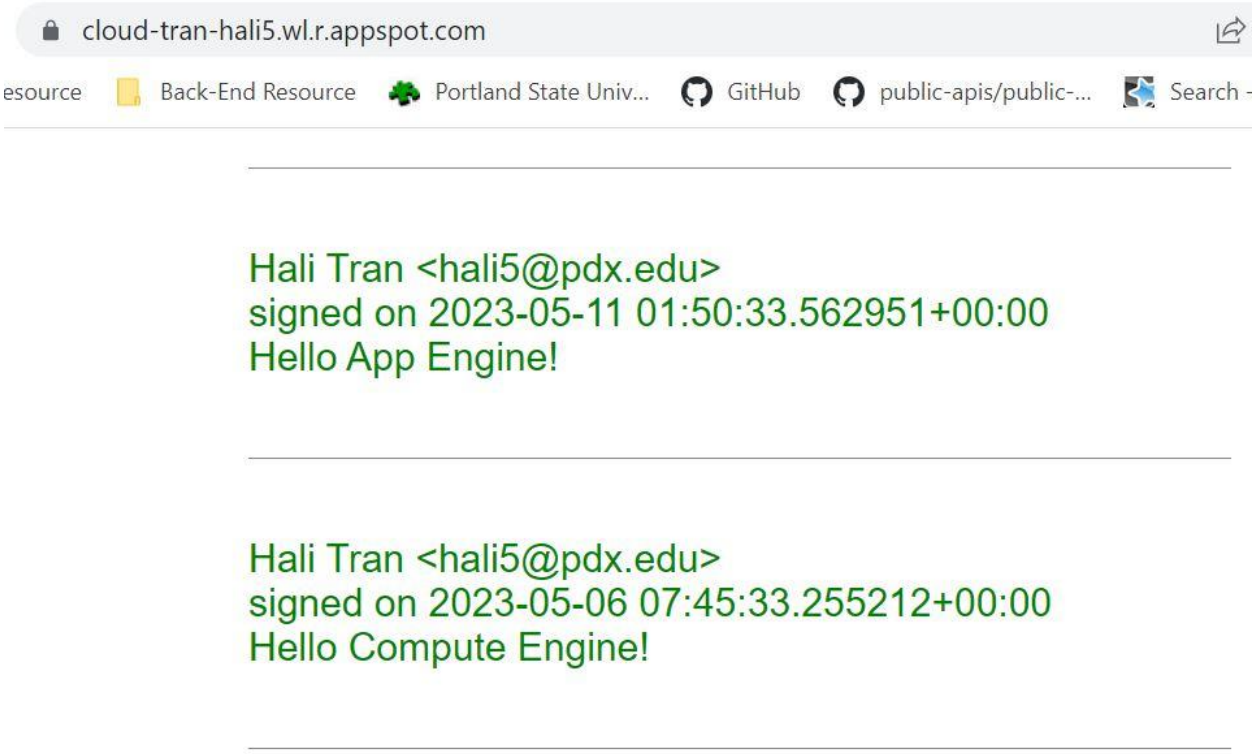
Take a screenshot of them.



06.1g: App Engine Guestbook

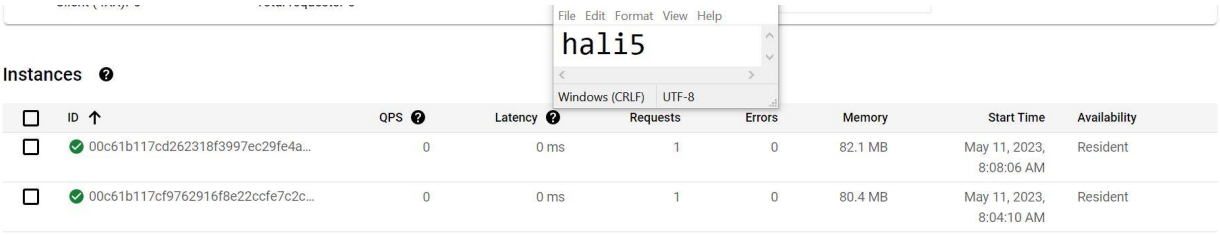
Deploying the Guestbook

Take a screenshot of the output that includes the URL in the address bar for your lab notebook



Handling failures seamlessly

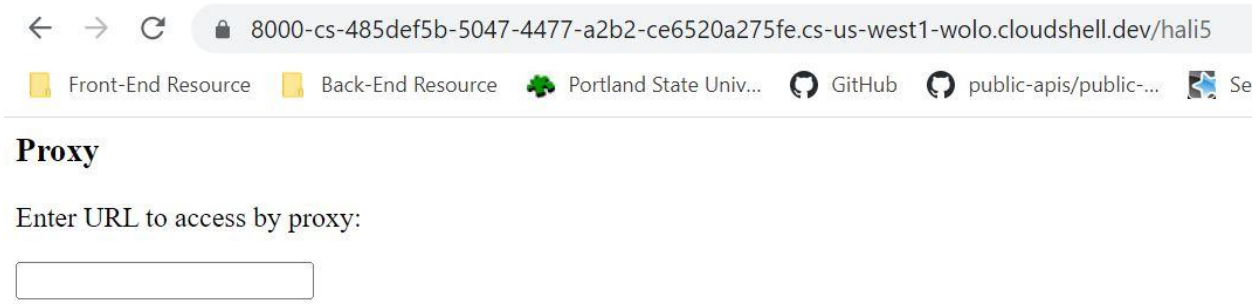
Take a screenshot of them



06.2g: Cloud Run, Secret Manager (Web proxy)

Setup secret proxy

Take a screenshot of the proxy and its results including the URL containing your OdinID.

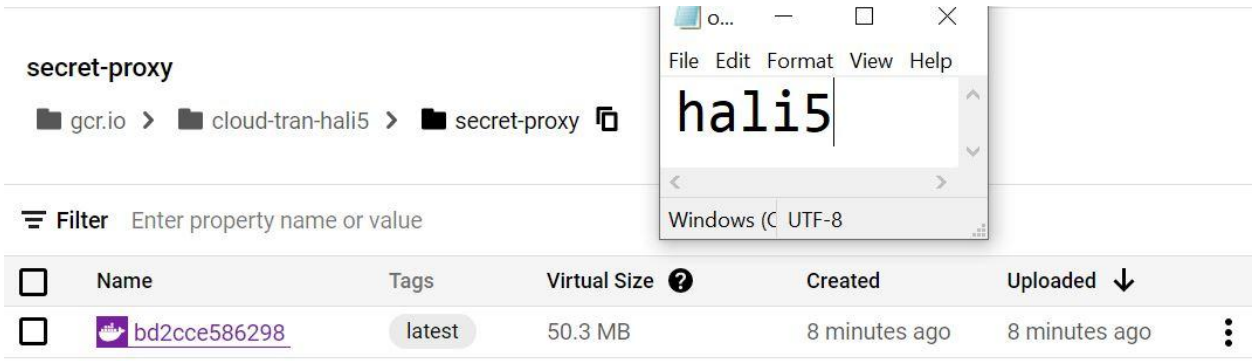


What is the security advantage of passing in the secret proxy route as an environment variable?

The security advantage of passing in the secret proxy route as an environment variable is that it prevents the route from being hardcoded in the application code. Since environment variables are stored outside of the application code, it can prevent theft or loss of sensitive information if users who shouldn't have access get their hands on the application code.

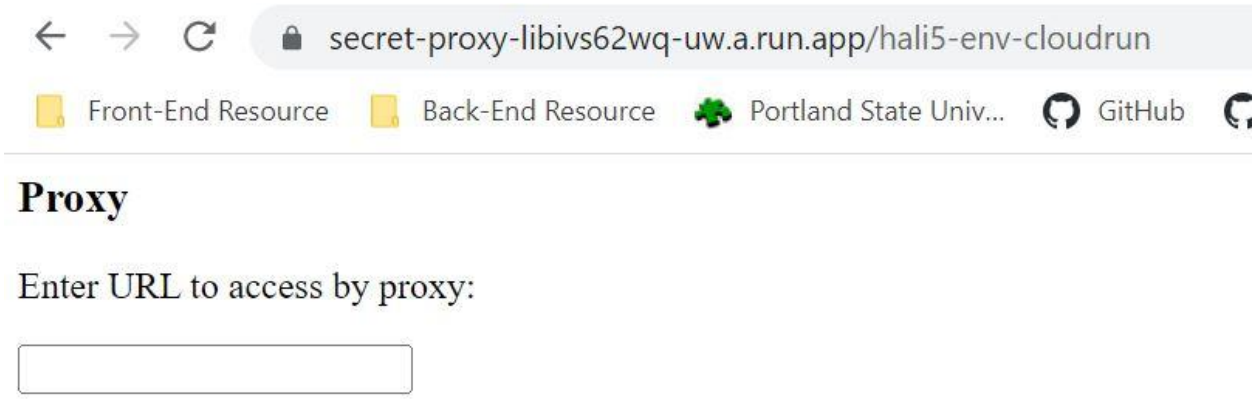
Cloud Build and Container Registry

Take a screenshot of the image in the registry that shows the size of the container for your lab notebook.

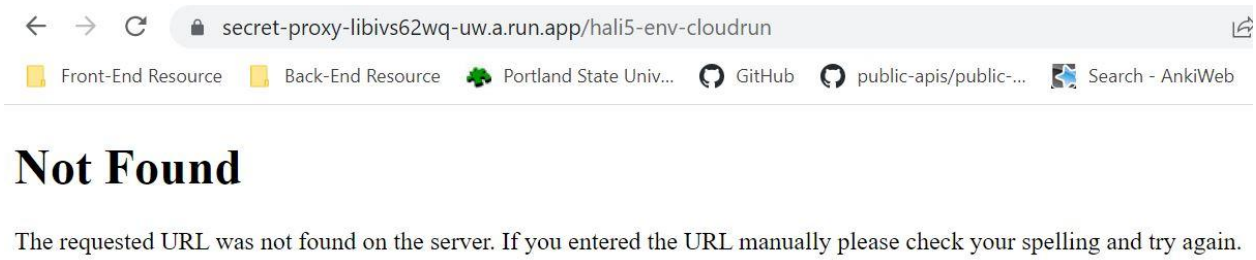


Deploy to Cloud Run

Take a screenshot of it that includes the proxy URL for your lab notebook.

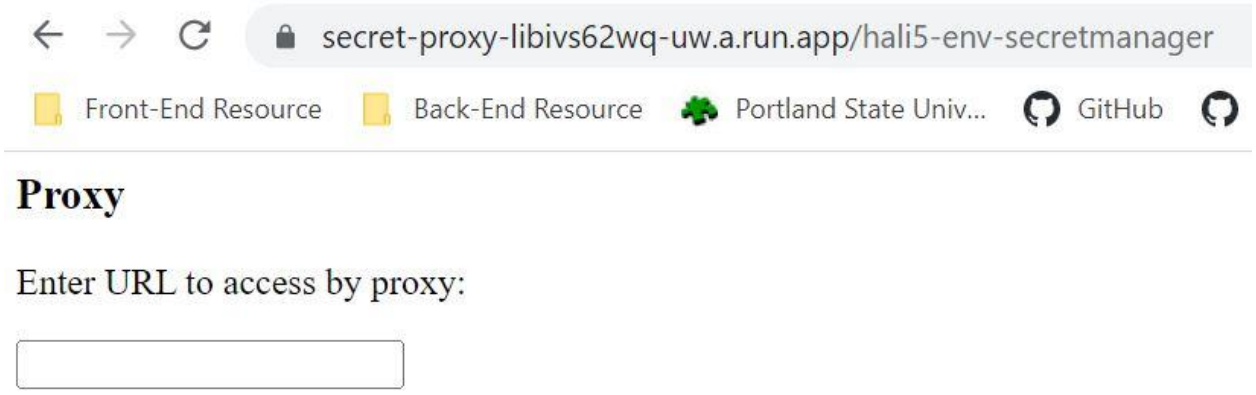


Take a screenshot of the error page that includes the proxy URL for your lab notebook.



Deploy to Cloud Run with Secret Manager

Take a screenshot of it that includes the proxy URL for your lab notebook.



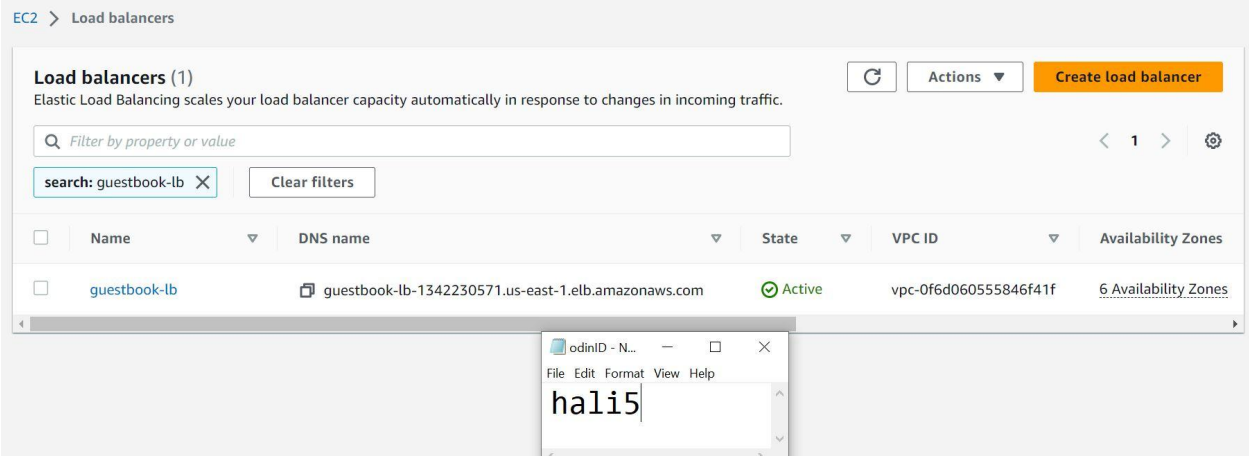
Identify the vulnerability in your lab notebook that Google has prevented.

The vulnerability that Google was able to prevent was unauthorized access to the Virtual Machine that runs the container by limiting access to Google Cloud Platform Services. Using this, Google prevents unauthorized access to VM's metadata and overall prevents exploitation of server side request forgery bugs and exploits.

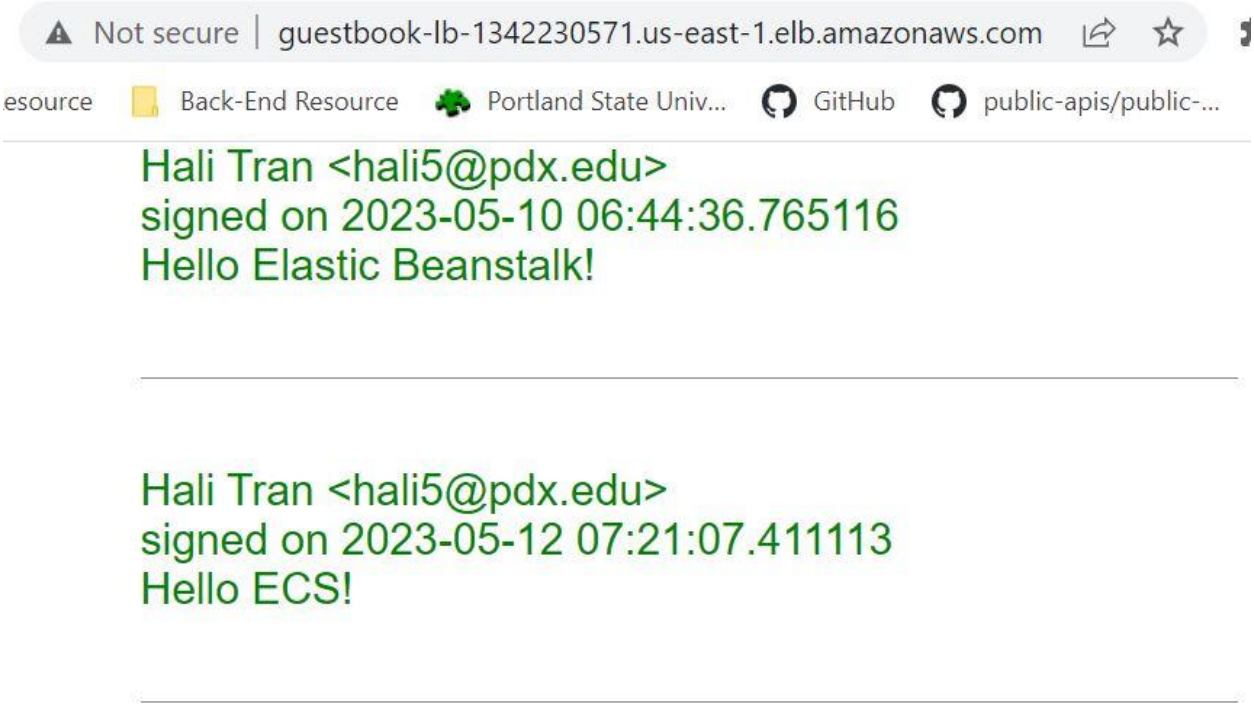
06.3a: ECS Guestbook

Examine the service

Take a screenshot of the DNS name of the guestbook-lb load balancer for your lab notebook.

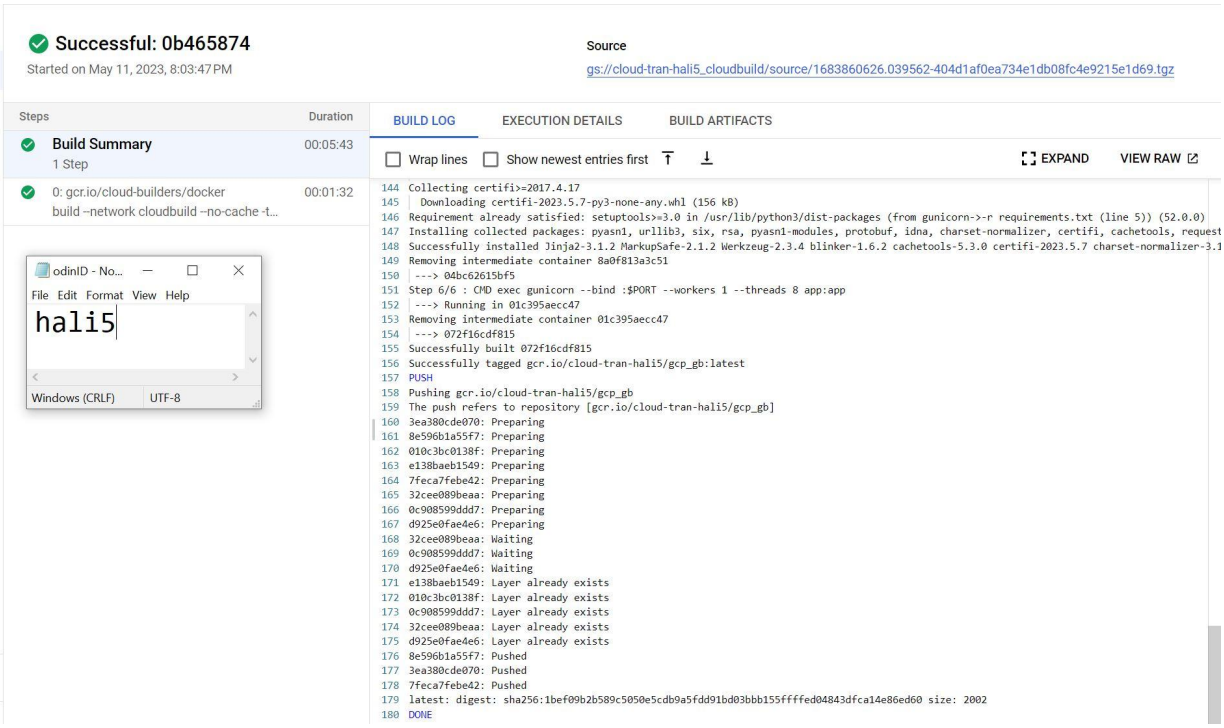


Take a screenshot of the Guestbook app running in a browser that includes the DNS name of the site

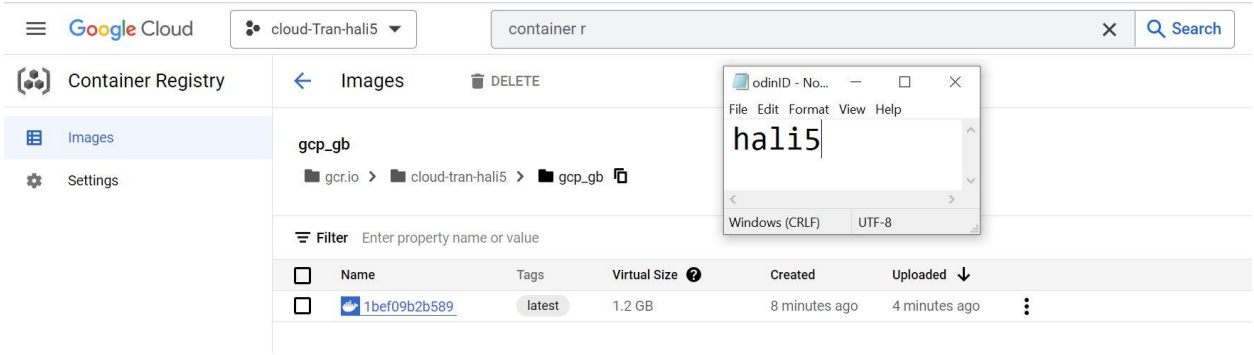


06.3g: Cloud Run Guestbook

Take a screenshot that includes the output of the command and the time it took to execute.

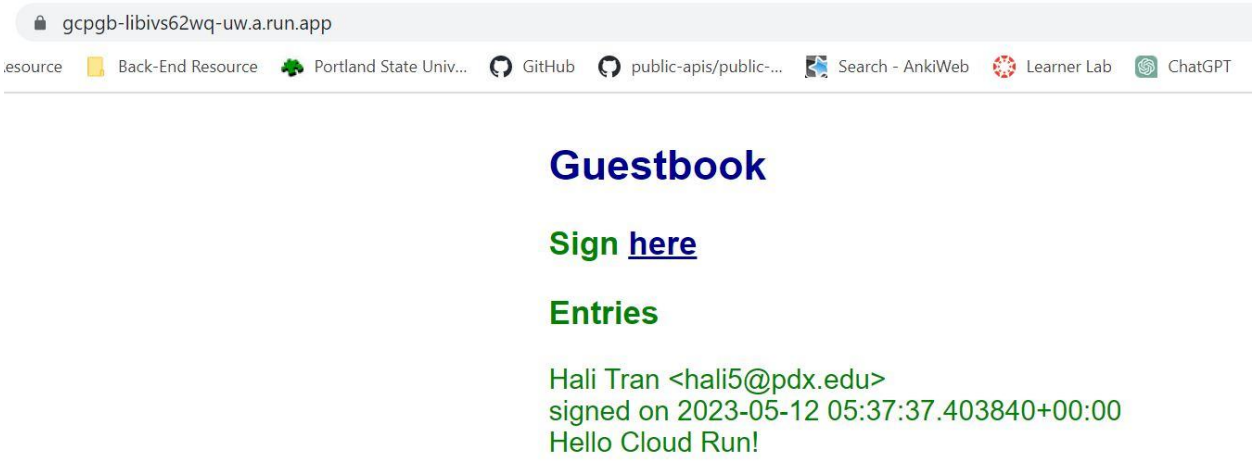


Take a screenshot showing the container image and its virtual size



View the Guestbook

Take a screenshot that includes the URL Cloud Run has created for your site.



What port do container instances listen on?

Container instances on Cloud Run listen on port 8080

What are the maximum number of instances Cloud Run will autoscale up to for your service?

The maximum number of instances Cloud Run will autoscale up is 100 instances.

06.4g: Cloud Functions, PubSub

After downloading the file from the bucket, where is it stored?

After downloading the file from the bucket, the file is stored in a temporary file and the path to this temporary file is stored in a variable named temp_local_filename.

What class in the ImageMagick package is used to do the blurring of the file?

The class in the ImageMagick package that is used to blur the file is *blur*.

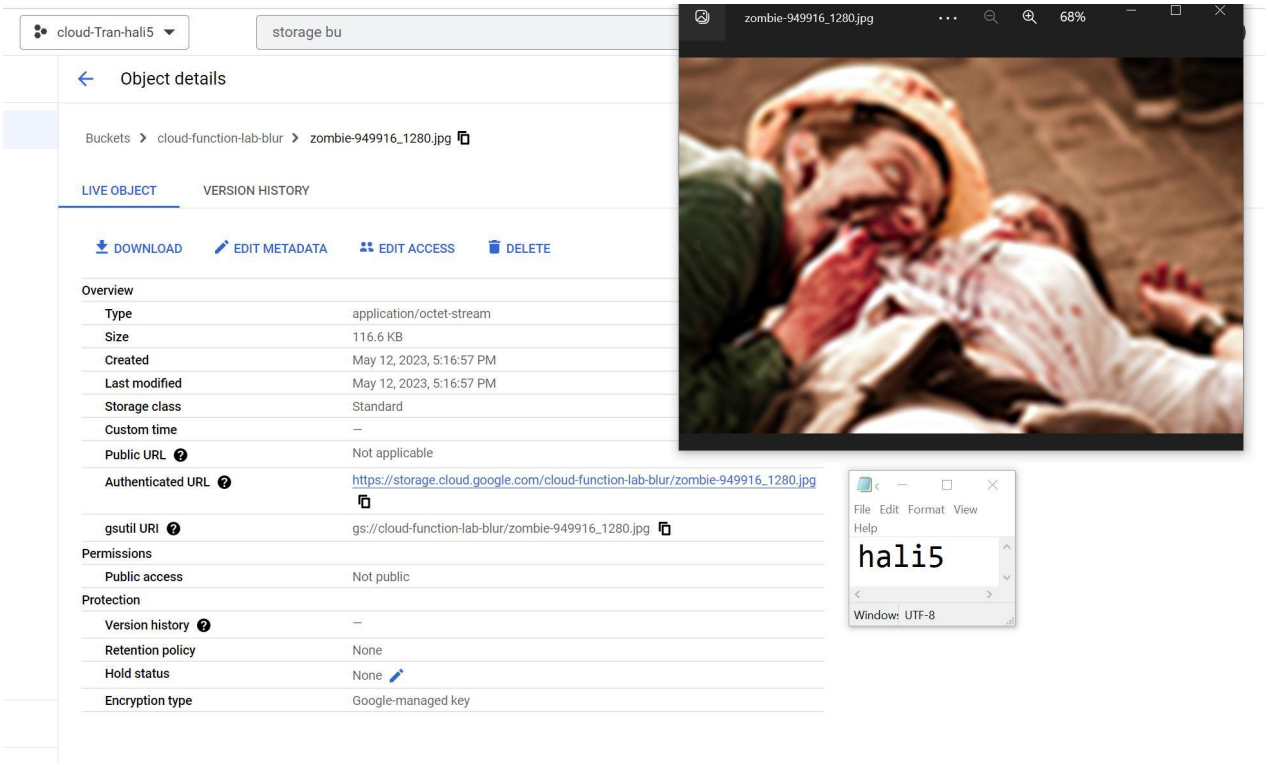
What lines of code perform the blurring of the image and its storage back into the filesystem?

The lines of code that perform the blurring of the image and its storage back in the filesystem are lines 73 and 74, as shown below.

```
image.resize(*image.size, blur=16, filter="hamming")
image.save(filename=temp_local_filename)
```

Test function

Take a screenshot of the blurred image in the output bucket for your lab notebook



Include a screenshot of the output logs that show that the above image was blurred.

```
LEVEL: I
NAME: blur_offensive_images
EXECUTION_ID: qj7piq7o6cgx
TIME_UTC: 2023-05-13 00:16:57.071
LOG: Image zombie-949916_1280.jpg was blurred.

LEVEL: I
NAME: blur_offensive_images
EXECUTION_ID: qj7piq7o6cgx
TIME_UTC: 2023-05-13 00:16:55.585
LOG:

LEVEL: I
NAME: blur_offensive_images
EXECUTION_ID: qj7piq7o6cgx
TIME_UTC: 2023-05-13 00:16:55.585
LOG: Image zombie-949916_1280.jpg was downloaded to /tmp/tmpzwrbenu7.

LEVEL: I
NAME: blur_offensive_images
EXECUTION_ID: qj7piq7o6cgx
TIME_UTC: 2023-05-13 00:16:55.483
LOG:

LEVEL: I
NAME: blur_offensive_images
EXECUTION_ID: qj7piq7o6cgx
TIME_UTC: 2023-05-13 00:16:55.483
LOG: The image zombie-949916_1280.jpg was detected as inappropriate.

LEVEL: I
NAME: blur_offensive_images
EXECUTION_ID: qj7piq7o6cgx
TIME_UTC: 2023-05-13 00:16:55.153
LOG:

LEVEL: I
NAME: blur_offensive_images
EXECUTION_ID: qj7piq7o6cgx
TIME_UTC: 2023-05-13 00:16:55.153
LOG: Analyzing zombie-949916_1280.jpg.

LEVEL: D
NAME: blur_offensive_images
EXECUTION_ID: qj7piq7o6cgx
TIME_UTC: 2023-05-13 00:16:52.292
LOG: Function execution started
hali5@cloudshell:~ (cloud-tran-hali5)$
```

PubSub via CLI

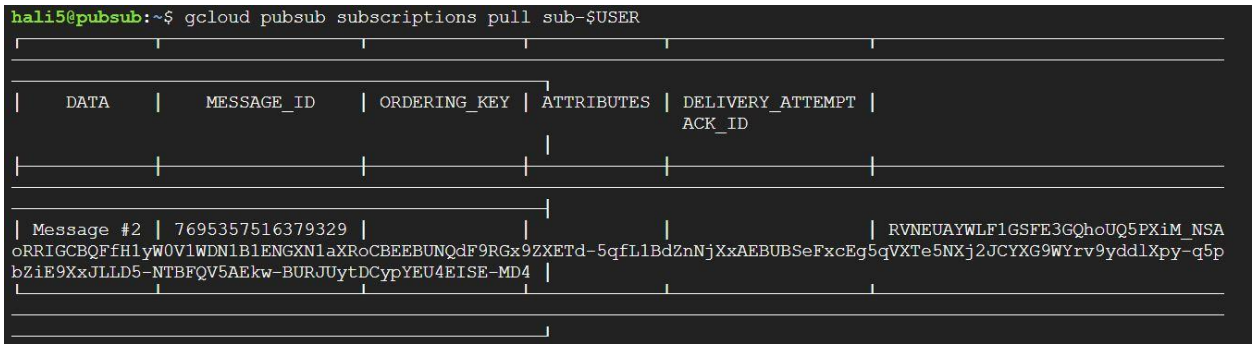
Why are there no items returned?

No items are returned because the subscriber subscribed to the topic after the publisher already published the message. Therefore, all the old messages are not available to the new subscriber and in this case, it would not receive message 1.

What is the messageId of the published message?

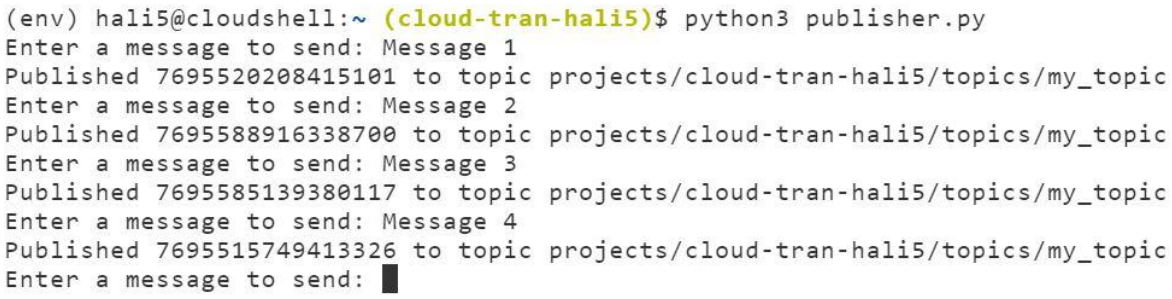
The messageId of the published message was 7695357516379329

Take a screenshot of the output of the successful pull that includes the message and its messageId.



Test programs and clean up

Take a screenshot showing the messageIds and messages sent



Take a screenshot showing the same messageIds and messages received