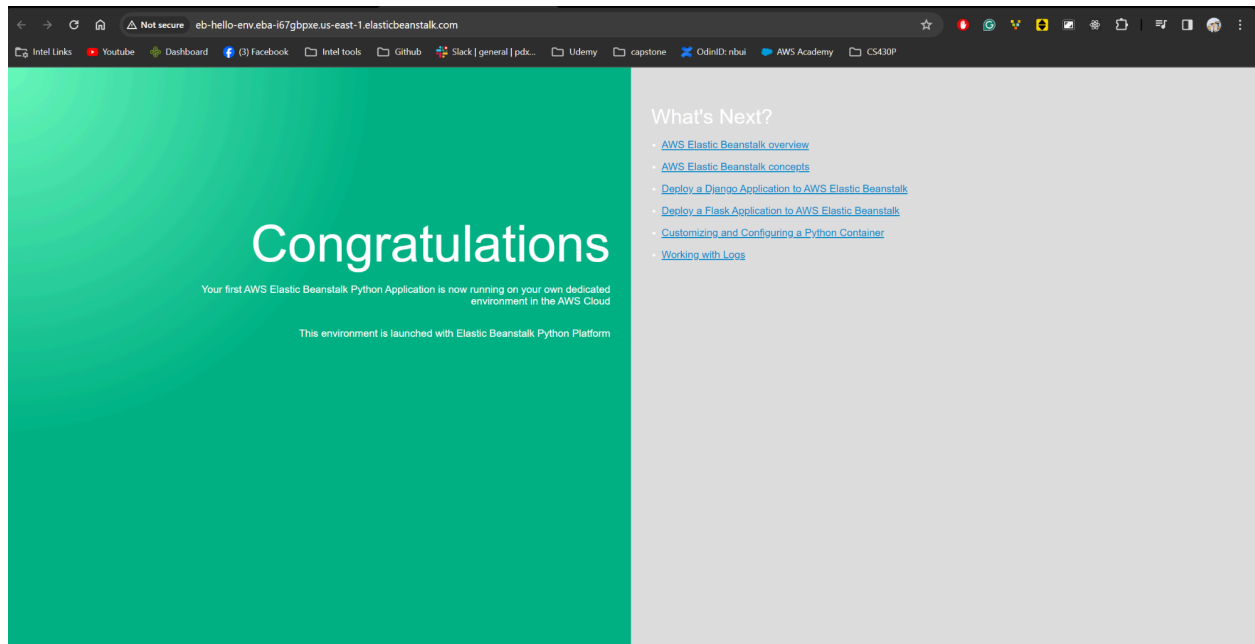


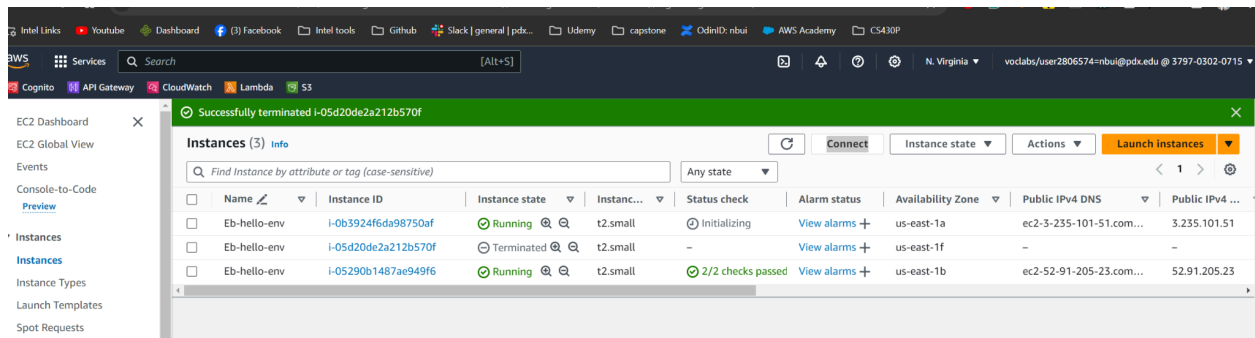
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# Lab 06.1a

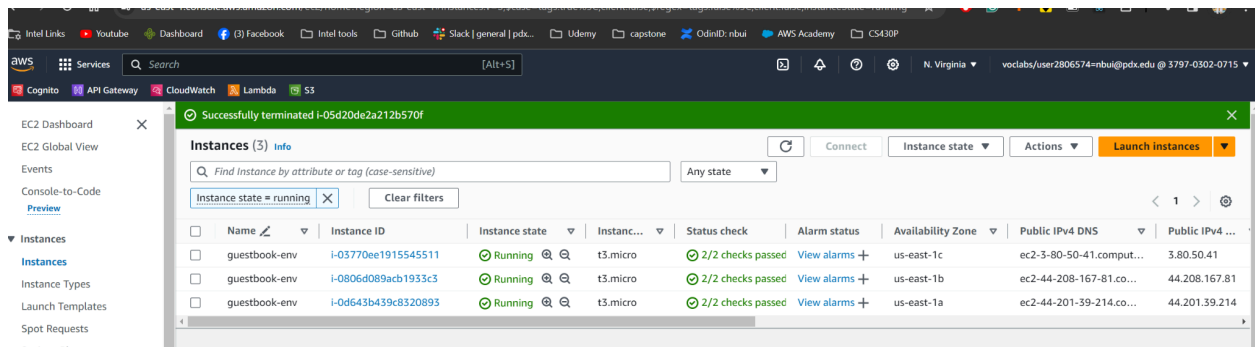
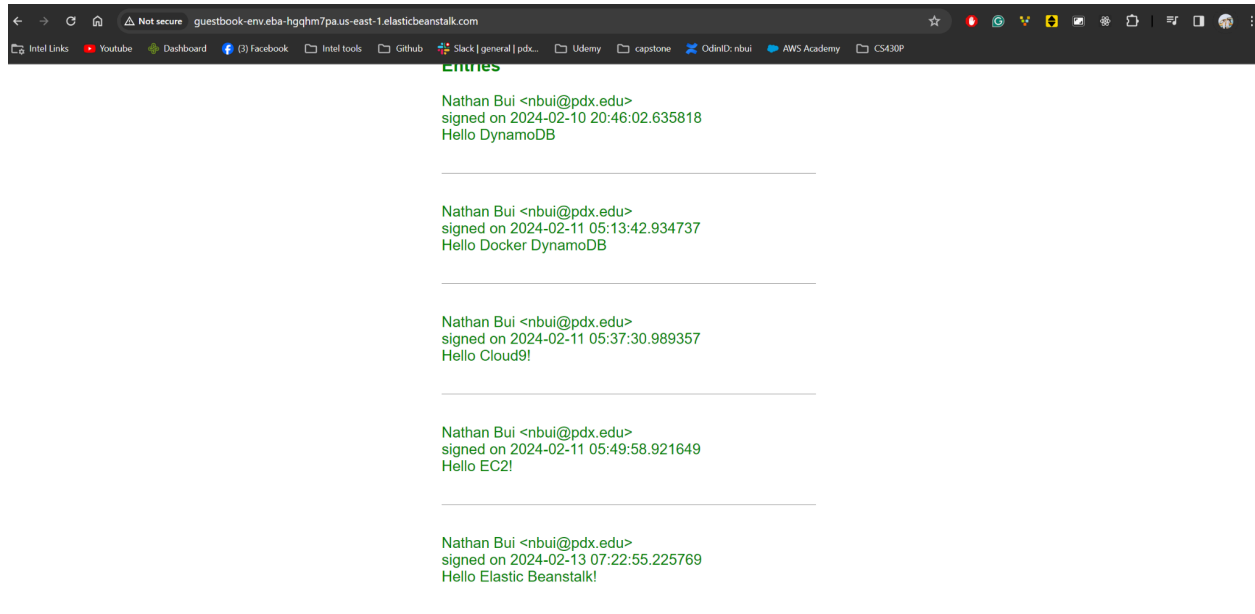
## 3. Running the application



## 4. Handling failures seamlessly

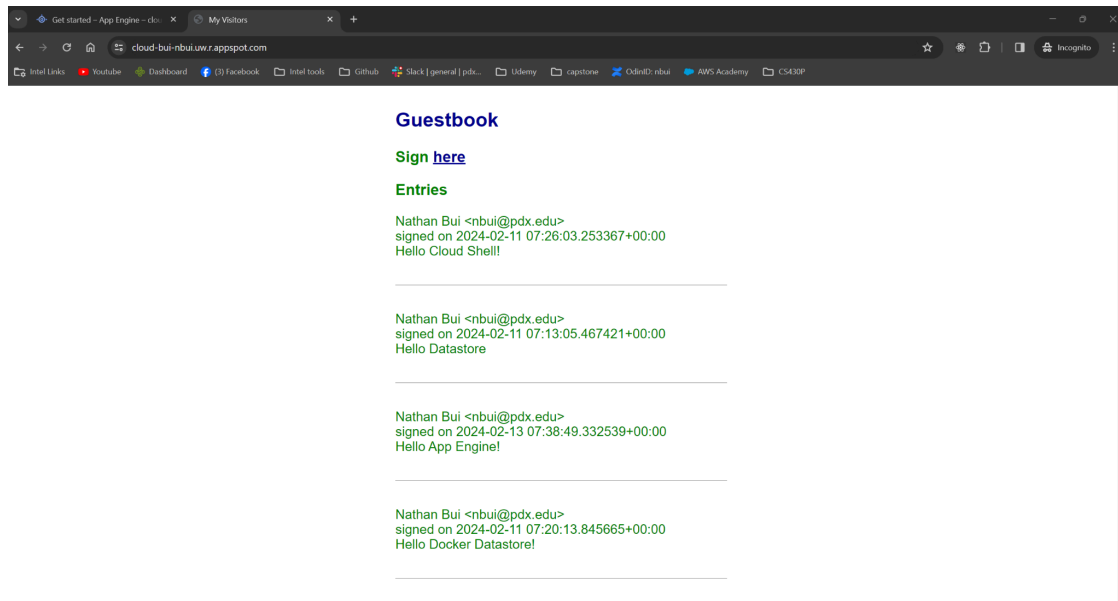


## 7. Deploying the Guestbook

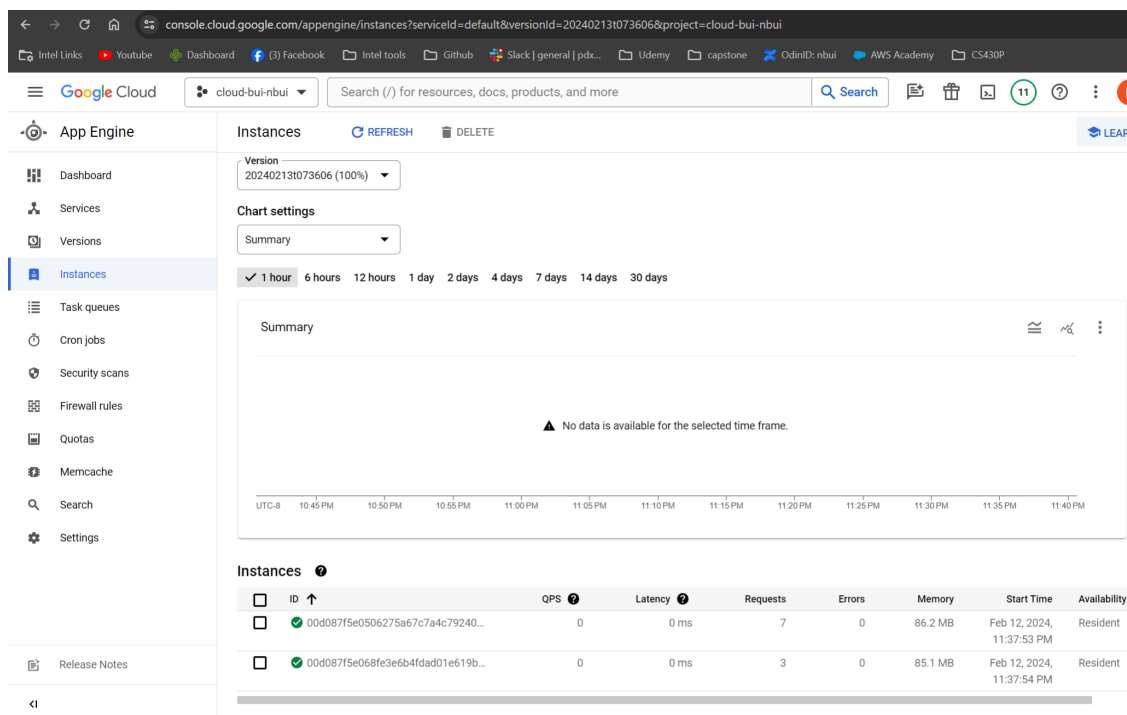


# Lab 06.1g

## 3. Deploying the Guestbook



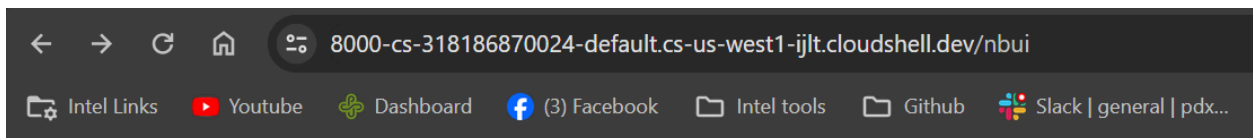
## 4. Handling failures seamlessly



## Lab 06.2g

### 8. Setup secret proxy

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

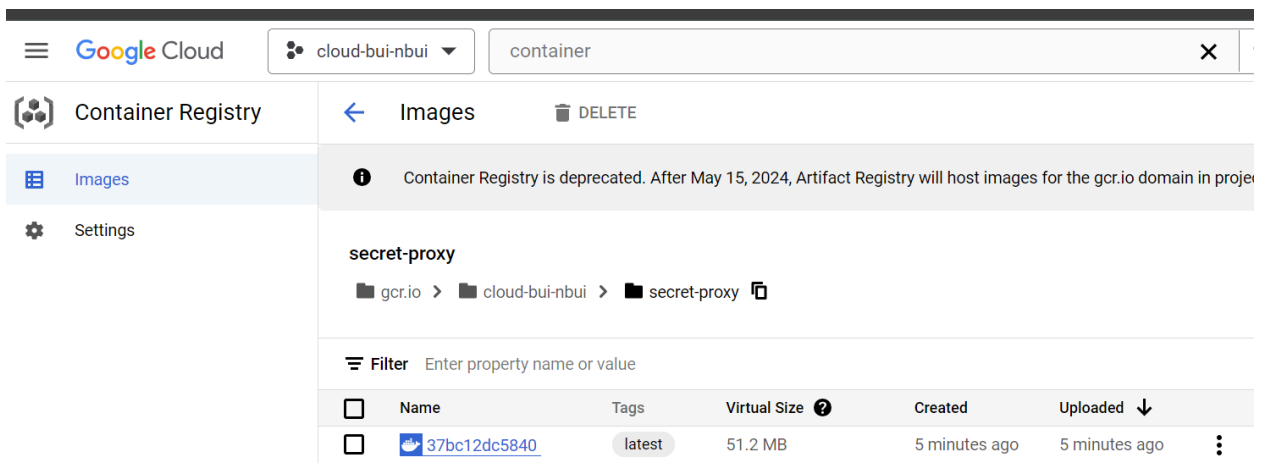


#### Proxy

Enter URL to access by proxy:

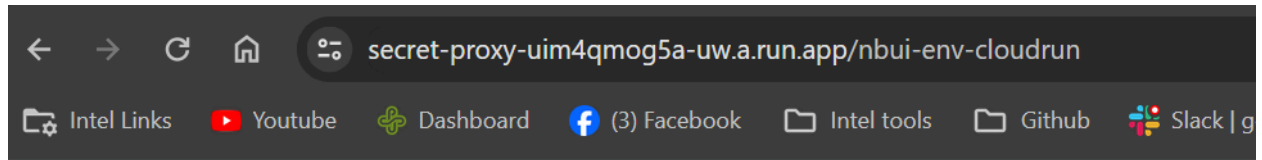
- What is the security advantage of passing in the secret proxy route as an environment variable?
  - Ensure that the secret is not hardcoded into the code so it can't be exploited. It helps to separate the secret information and the application in the same place.
  - Provide the flexibility to change/update the secret

### 9. Cloud Build and Container Registry



## 10. Deploy to Cloud Run

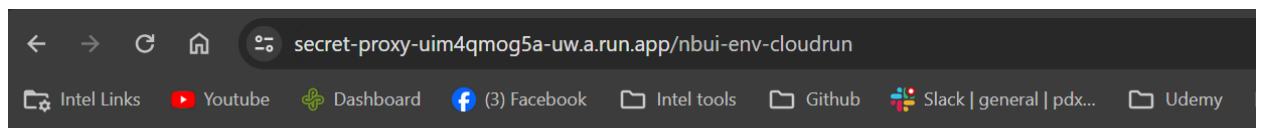
- Take a screenshot of it that includes the proxy URL for your lab notebook.



### Proxy

Enter URL to access by proxy:

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

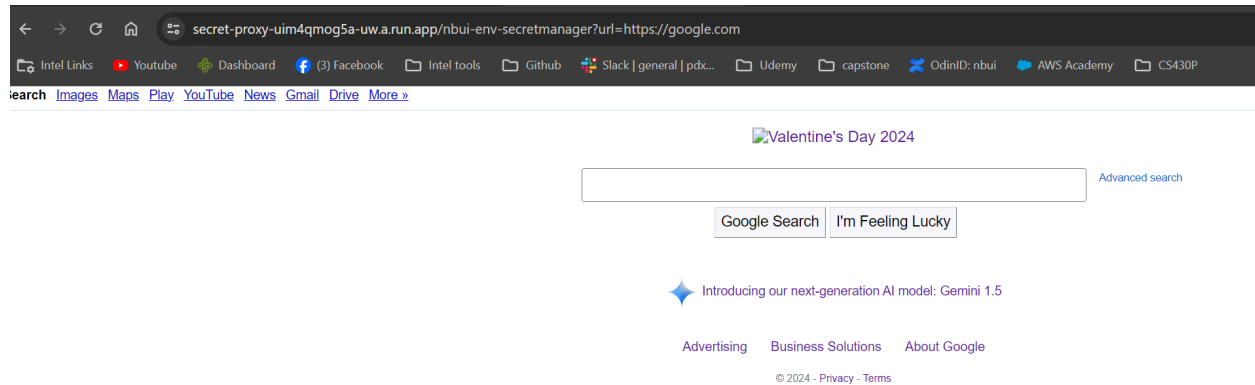


### Not Found

The requested URL was not found on the server. If you entered the URL manually please check your spelling and try again.

## 12. 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.
  - SSRF attack with Metadata endpoint bug when trying to access unauthorized resources within the platform/provider infrastructure

# Lab 06.3a

## 5. Examine the service

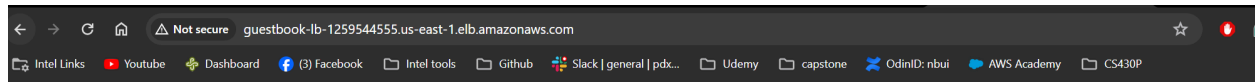
- Take a screenshot of the DNS name of the guestbook-lb load balancer for your lab notebook

The screenshot shows the AWS Management Console interface for the 'guestbook-lb' load balancer. The left sidebar contains navigation links for various AWS services. The main content area displays the 'Details' tab for the load balancer, which is in an 'Active' state. The details are organized into a grid of key-value pairs. A red arrow points to the 'DNS name' field, which shows 'guestbook-lb-1259544555.us-east-1.elb.amazonaws.com (A Record)'. The 'Load balancer ARN' is also visible at the bottom left of the details section.

Details			
Load balancer type	Status	VPC	IP address type
Application	Active	vpc-02cbdc14edc71a217	IPv4
Scheme	Hosted zone	Availability Zones	Date created
Internet-facing	Z355XDOTRQ7X7K	subnet-037fa0f672a4fee6 (us-east-1d use1-az6)	February 15, 2024, 13:57 (UTC-08:00)
		subnet-0a8d564d9c81f8df1 (us-east-1a use1-az1)	
		subnet-08524d50ac00c51b0 (us-east-1c use1-az4)	
		subnet-09e7667fe247cd9dd (us-east-1e use1-az3)	
		subnet-0638a8dace306b386 (us-east-1f use1-az5)	
		subnet-0b0e9b8c70f47745b (us-east-1b use1-az2)	
Load balancer ARN	DNS name		
arn:aws:elasticloadbalancing:us-east-1:379703020715:loadbalancer/app/guestbook-lb/39d04099267d7f0	guestbook-lb-1259544555.us-east-1.elb.amazonaws.com (A Record)		



## 6. Visit the site



Nathan Bui <nbui@pdx.edu>  
signed on 2024-02-11 05:13:42.934737  
Hello Docker DynamoDB

---

Nathan Bui <nbui@pdx.edu>  
signed on 2024-02-11 05:37:30.989357  
Hello Cloud9!

---

Nathan Bui <nbui@pdx.edu>  
signed on 2024-02-11 05:49:58.921649  
Hello EC2!

---

Nathan Bui <nbui@pdx.edu>  
signed on 2024-02-13 07:22:55.225769  
Hello Elastic Beanstalk!

---

Nathan Bui <nbui@pdx.edu>  
signed on 2024-02-15 22:08:24.837398  
Hello ECS!

# Lab 06.3g

## 2. Prepare a container image

The screenshot shows the Google Cloud Build console for a build named 'cloud-bui-nbui'. The build is successful, with a status of 'Successful: a4bb87f7-35ad-4662-80f3-d04f21237cba'. It started on Feb 15, 2024, at 2:29:46 PM. The source is a GitHub repository. The build log shows the following steps:

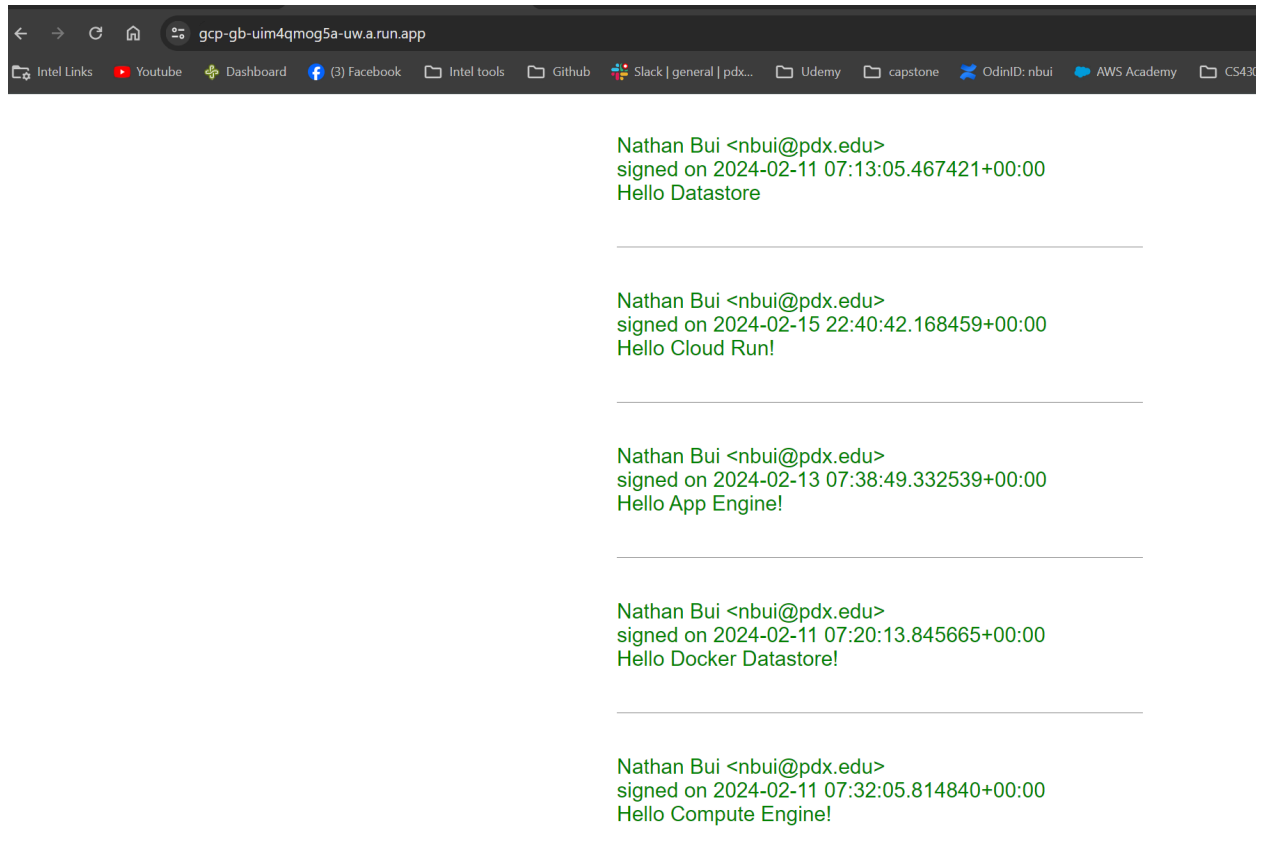
Steps	Duration	BUILD LOG	EXECUTION DETAILS	BUILD ARTIFACTS
<b>Build Summary</b> 1 Step	00:04:12			
0: gcr.io/cloud-builders/docker build --network cloudbuild --no-ca...	00:01:36	<pre>1 starting_build "a4bb87f7-35ad-4662-80f3-d04f21237cba" 2 3 FETCHSOURCE 4 Fetching storage object: gs://cloud-bui-nbui_cloudbuild/source/1708036167.002667-c8374691bd104faeb0f55c864f97aa2e.tgz#17080361 5 Copying gs://cloud-bui-nbui_cloudbuild/source/1708036167.002667-c8374691bd104faeb0f55c864f97aa2e.tgz#1708036185937334... 6 / [0 files][ 0.0 B / 10.0 MiB] 7 / [1 files][ 10.0 MiB / 10.0 MiB] 8 Operation completed over 1 objects/10.0 MiB. 9 BUILD</pre>		

## 3. View container image

The screenshot shows the Google Cloud Container Registry console for the 'cloud-bui-nbui' project. The 'Images' tab is selected, showing a list of images. The image 'gcp\_gb' is highlighted, with a tag of 'latest'. The image size is 1.2 GB, and it was created 5 minutes ago and uploaded 2 minutes ago.

Name	Tags	Virtual Size	Created	Uploaded
e87a59cbd21e	latest	1.2 GB	5 minutes ago	2 minutes ago

## 5. View the Guestbook



- What port do container instances listen on? 8080
- What are the maximum number of instances Cloud Run will autoscale up to for your service?  
100

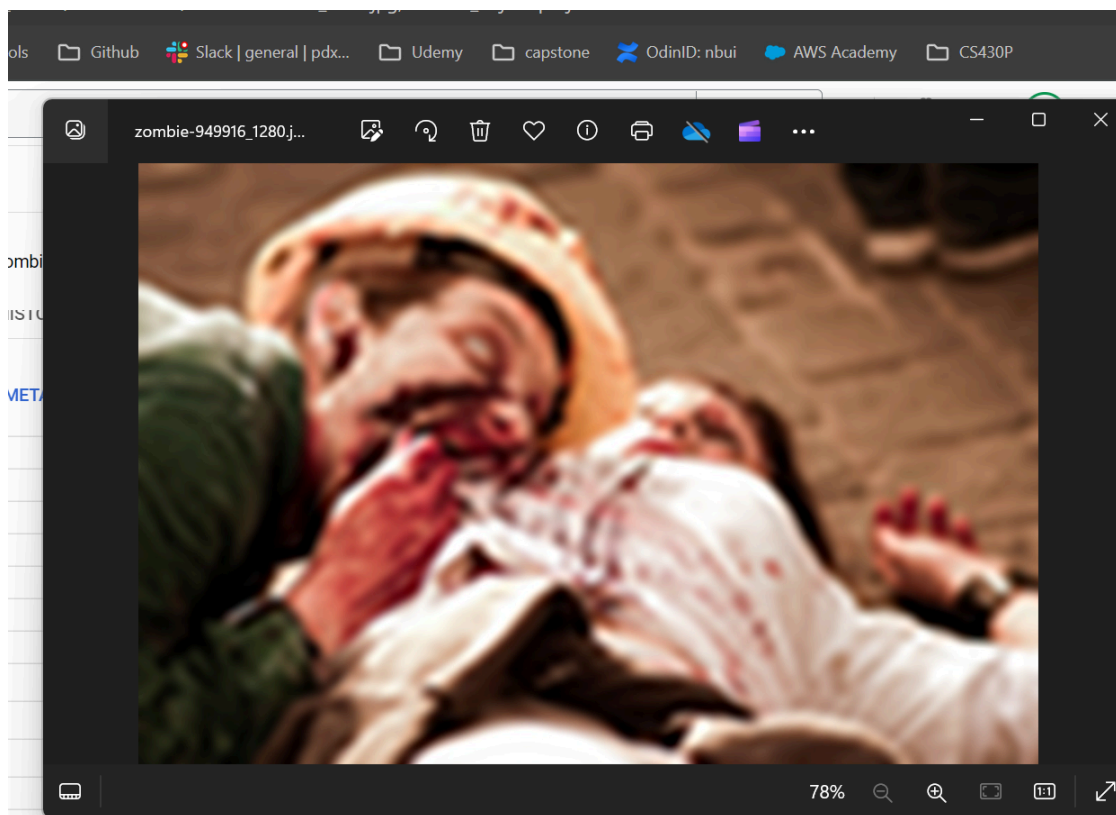
## Lab 06.4g

4. -

- After downloading the file from the bucket, where is it stored?
  - The output bucket we created (its name would be saved in `BLURRED_BUCKET_NAME` env variable)
- What class in the ImageMagick package is used to do the blurring of the file?
  - `wand.image.Image`
- What lines of code perform the blurring of the image and its storage back into the filesystem?
  - Line 71-73 (resize and save the blurred image)

## 7. 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.

```
Operation completed over 1 objects/353.0 KiB.
nbui@cloudshell:~/python-docs-samples/functions/imagemagick (cloud-bui-nbui)$ gcloud functions logs read
LEVEL: D
NAME: blur_offensive_images
EXECUTION_ID: x4dlbttxkwud
TIME_UTC: 2024-02-15 23:10:17.122
LOG: Function execution took 11641 ms, finished with status: 'ok'

LEVEL: I
NAME: blur_offensive_images
EXECUTION_ID: x4dlbttxkwud
TIME_UTC: 2024-02-15 23:10:17.119
LOG:

LEVEL: I
NAME: blur_offensive_images
EXECUTION_ID: x4dlbttxkwud
TIME_UTC: 2024-02-15 23:10:17.119
LOG: Blurred image uploaded to: gs://cs430-nbui-2/zombie-949916_1280.jpg

LEVEL: I
NAME: blur_offensive_images
EXECUTION_ID: x4dlbttxkwud
TIME_UTC: 2024-02-15 23:10:16.982
```

## 11. PubSub via CLI

- Why are there no items returned?
  - Cause the message was published before the topic had any subscribers. Hence the message could be considered as delivered and was deleted.

## 12. -

```
nbui@pubsub:~$ gcloud pubsub subscriptions pull sub-${USER}
```

DATA	MESSAGE_ID	ORDERING_KEY	ATTRIBUTES	DELIVERY_ATTEMPT	ACK_ID
Message #2	10488159775768003				RFAGFixdRkhRNxkIaFEOT14jPzUgKEURBgBPAihdeTFNIEFdcGhRDRlyfWB9PgtFAwAUW3dYURsHaE5tdR-Y_ZPsS0NUa1oXCQpEVndYXB4KblRcdQR5o-OSpMKGLHgJ0jqMo_TBbTuXj5cMZiM9XhJLLD5-NTJFQV5AEkw-B0RJUytDCypYEU4EISE-MD5FUw

```
nbui@pubsub:~$
```

## 15. Test programs and clean up

- Take a screenshot showing the `messageIds` and messages sent

```
(env) nbui@cloudshell:~/python-docs-samples/functions/imagemagick (cloud-bui-nbui)$ python3 publisher.py
Enter a message to send: this is the first testing
Published 10487998314512771 to topic projects/cloud-bui-nbui/topics/my_topic
Enter a message to send: this is the 2nd message
Published 10488309512140452 to topic projects/cloud-bui-nbui/topics/my_topic
Enter a message to send: this is the 3rd message
Published 10488223981020428 to topic projects/cloud-bui-nbui/topics/my_topic
Enter a message to send: 
```

- Take a screenshot showing the same `messageIds` and messages received

```
(env) nbui@pubsub:~$ python3 subscriber.py
Using subscription previously created...
Received message 10487998314512771: 2024-02-15 23:49:09 (projects/cloud-bui-nbui/topics/my_topic) : this is the
first testing
Received message 10488309512140452: 2024-02-15 23:49:34 (projects/cloud-bui-nbui/topics/my_topic) : this is the
2nd message
Received message 10488223981020428: 2024-02-15 23:49:46 (projects/cloud-bui-nbui/topics/my_topic) : this is the
3rd message

```