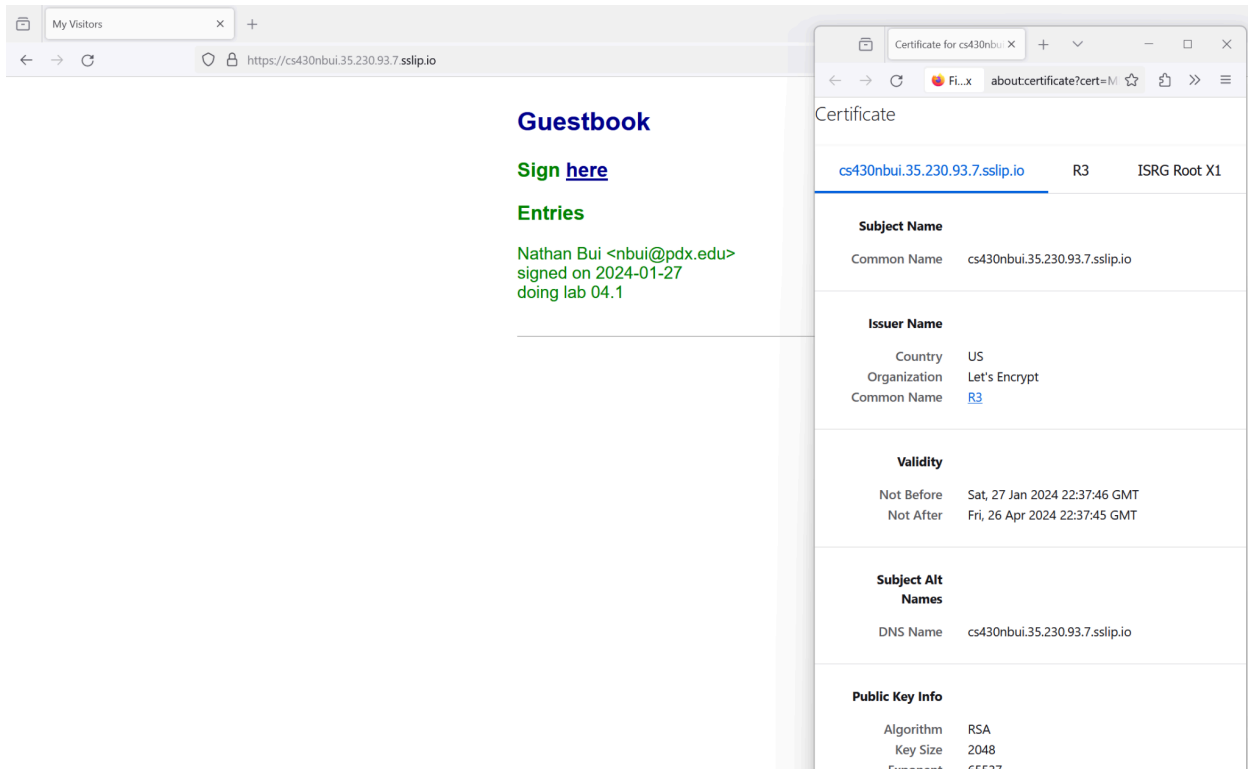


<b>Lab 0.4.1g</b>	<b>1</b>
<b>Lab 04.2g</b>	<b>3</b>
3. Build and run the Ubuntu-based container	3
6. Running from Docker Hub	3
8. Build and run the Alpine-based container	6
9. Docker Hub Alpine	7
10. Compute Engine Ubuntu VM deployment	7
13. -	8

# Lab 0.4.1g

- Take a screenshot of the site along with its Let's Encrypt certificate and include it in your lab notebook



## Lab 04.2g

### 3. Build and run the Ubuntu-based container

```
nbui@course-vm:~/cs430-src/04_container_dockerhub$ docker images
REPOSITORY      TAG          IMAGE ID      CREATED        SIZE
helloubuntu     latest      7adf16644e64  11 seconds ago 447MB
ubuntu          20.04       f78909c2b360  6 weeks ago   72.8MB
nbui@course-vm:~/cs430-src/04_container_dockerhub$
```

### 6. Running from Docker Hub

- Run the image directly from Docker Hub and show a screenshot of the output of the command in your lab notebook.

```
nbui@course-vm:~/cs430-src/04_container_dockerhub$ docker run -di -p 8000:5000 --name hellou nathanbuiidx/helloubuntu
Unable to find image 'nathanbuiidx/helloubuntu:latest' locally
latest: Pulling from nathanbuiidx/helloubuntu
527f5363b98e: Already exists
0bb60ea3672e: Pull complete
d3d7b96c8dae: Pull complete
47aa81c24da6: Pull complete
778e13612589: Pull complete
Digest: sha256:9bf32f8968f653a35f96811f7114cbd243e621e5369020dbad9acd0da1ef14f1
Status: Downloaded newer image for nathanbuiidx/helloubuntu:latest
67d012210c5f167fc6ec4d90d9b8226ce50b0891fd39a30786f970b88ce4a034
nbui@course-vm:~/cs430-src/04_container_dockerhub$
```

- Take a screenshot of the container image and its size for your lab notebook.
- What layer adds the most to the container image? How much does it add?



## nathanbuiidx/helloubuntu:latest

DIGEST: sha256:9bf32f8968f653a35f96811f7114cbd243e621e5369020dbad9acd0da1ef14f1

OS/ARCH  
linux/amd64

COMPRESSED SIZE ⓘ  
157.95 MB

LAST PUSHED  
7 minutes ago by [nathanbuiidx](#)

TYPE  
Image

### Image Layers

### Vulnerabilities

#### IMAGE LAYERS ⓘ

1	ARG RELEASE	0 B
2	ARG LAUNCHPAD_BUILD_ARCH	0 B
3	LABEL org.opencontainers.image.ref.name=ubuntu	0 B
4	LABEL org.opencontainers.image.version=20.04	0 B
5	ADD file ... in /	26.24 MB
6	CMD ["/bin/bash"]	0 B
7	LABEL maintainer=nbui@pdx.edu	0 B
8	/bin/sh -c apt-get update -y	32.12 MB
9	<u>/bin/sh -c apt-get install -y</u>	<u>97.64 MB</u>
10	COPY dir:0ae80f3f959e401ca25e86523d761b67319d3e...	3.01 KB
11	WORKDIR /app	0 B
12	/bin/sh -c pip install -r	1.95 MB
13	ENTRYPOINT ["python3"]	0 B
14	CMD ["app.py"]	0 B

#### Command

ARG RELEASE

## 8. Build and run the Alpine-based container

- Take a screenshot of the image generated and its size for your lab notebook. How much smaller is the image than the Ubuntu one? ~100MB

```
Successfully tagged helloalpine:latest
nbui@course-vm:~/cs430-src/04_container_dockerhub$ docker images
REPOSITORY      TAG          IMAGE ID       CREATED        SIZE
helloalpine     latest      08856e63a177   11 seconds ago 66MB
python          alpine      b32f0c9b815c   5 weeks ago   51.7MB
ubuntu          20.04      f78909c2b360   6 weeks ago   72.8MB
nbui@course-vm:~/cs430-src/04_container_dockerhub$
```

- Show the output of this command in a screenshot for your lab notebook. What might have happened? The Alpine version removed the bash shell feature

```
nbui@course-vm:~/cs430-src/04_container_dockerhub$ docker exec -it helloa /bin/bash
OCI runtime exec failed: exec failed: unable to start container process: exec: "/bin/bash": stat /bin/bash: no such file or directory: unknown
nbui@course-vm:~/cs430-src/04_container_dockerhub$
```

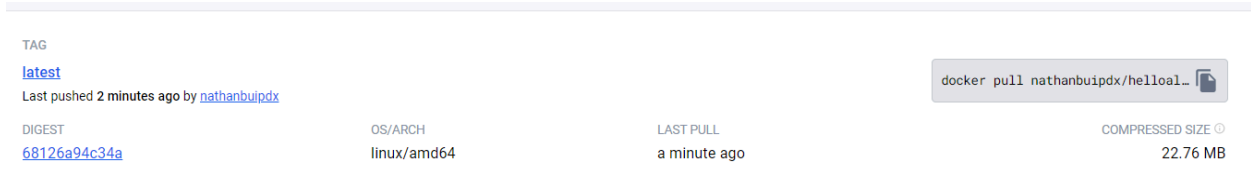
- Take a screenshot of the output of each

```
root@helium-one: /app # cat /etc/alpine-release
3.19.1
root@helium-one: /etc # nbui
```

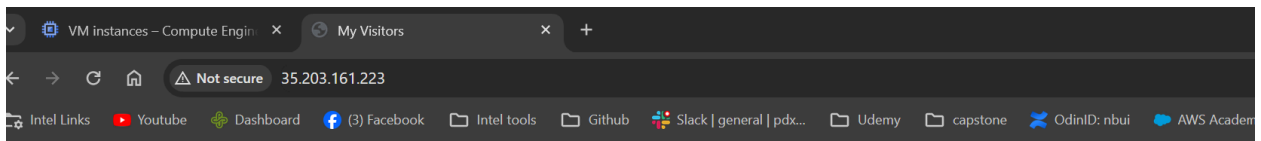
```
/app # ps -ef
PID   USER     TIME   COMMAND
    1   root      0:00   python3 app.py
    8   root      0:01   /usr/local/bin/python3 app.py
   17   root      0:00   /bin/sh
   28   root      0:00   ps -ef
/app # nbui
```

## 9. Docker Hub Alpine

- Take a screenshot of the container image and its size.



## 10. Compute Engine Ubuntu VM deployment



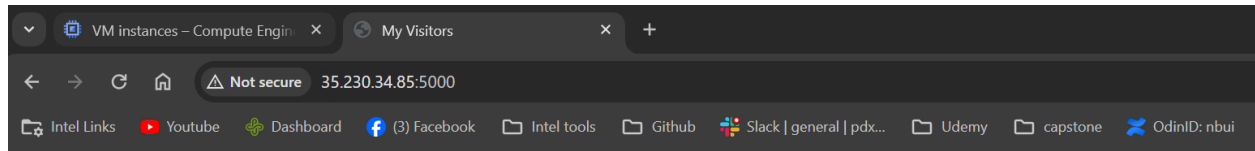
### Guestbook

[Sign here](#)

### Entries

Nathan BUI <nbui@pdx.edu>  
signed on 2024-01-30  
Hello Compute Engine + Docker!

13. -



## Guestbook

Sign [here](#)

### Entries

Nathan Bui <nbui@pdx.edu>  
signed on 2024-01-30  
Hello ContainerOS!

---