Lab Notebook – Week 4

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04.1: nginx Compute Engine Guestbook
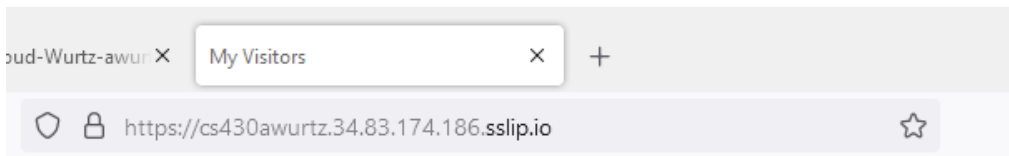
04.2g: Docker Guestbook

Build and run the Ubuntu-based container

```
awurtz@course-vm2:~/cs430-src/04_container_dockerhub$ docker images
REPOSITORY      TAG       IMAGE ID       CREATED          SIZE
helloubuntu     latest    2801a42b907b   29 seconds ago   446MB
awurtz@course-vm2:~/cs430-src/04_container_dockerhub$
```

Take a screenshot of the container image and its size

awurtz/helloubuntu ☆

By awurtz • Updated 3 minutes ago

Image

Manage Repository

⬇ Pulls 1

Overview   **Tags**

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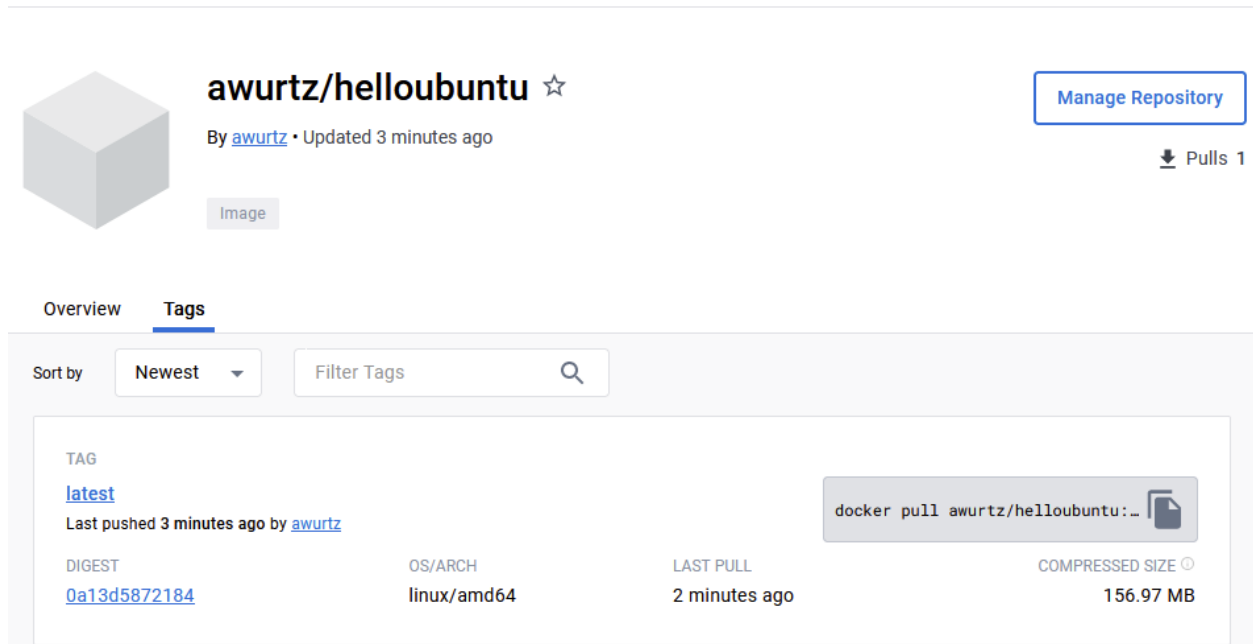| TAG			
latest			docker pull awurtz/helloubuntu:… 📋
Last pushed 3 minutes ago by awurtz			
DIGEST	OS/ARCH	LAST PULL	COMPRESSED SIZE ⓘ
0a13d5872184	linux/amd64	2 minutes ago	156.97 MB

What layer adds the most to the container image? How much does it add?

```
9   RUN /bin/sh -c apt-get install   97.64 MB
```

The run /bin/sh -c apt-get install layers adds the most to the image size. It adds 97.54 MB.

Addison Wurtz
CS 530
notebooks/Week4

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?

```
awurtz@course-vm2:~/cs430-src/04_container_dockerhub$ docker images
REPOSITORY      TAG        IMAGE ID       CREATED            SIZE
helloalpine     latest     b5fcdce6f065   15 minutes ago     66MB
<none>          <none>     b117cdc91507   About an hour ago   120MB
python          alpine     a4c7645b18dc   7 days ago         51.8MB
ubuntu          20.04      bf40b7bc7a11   2 weeks ago        72.8MB
```

This image is 380MB smaller than the ubuntu based container image.

Show the output of this command in a screenshot for your lab notebook. What might have happened?

```
awurtz@course-vm2:~/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
awurtz@course-vm2:~/cs430-src/04_container_dockerhub$ ▯
```

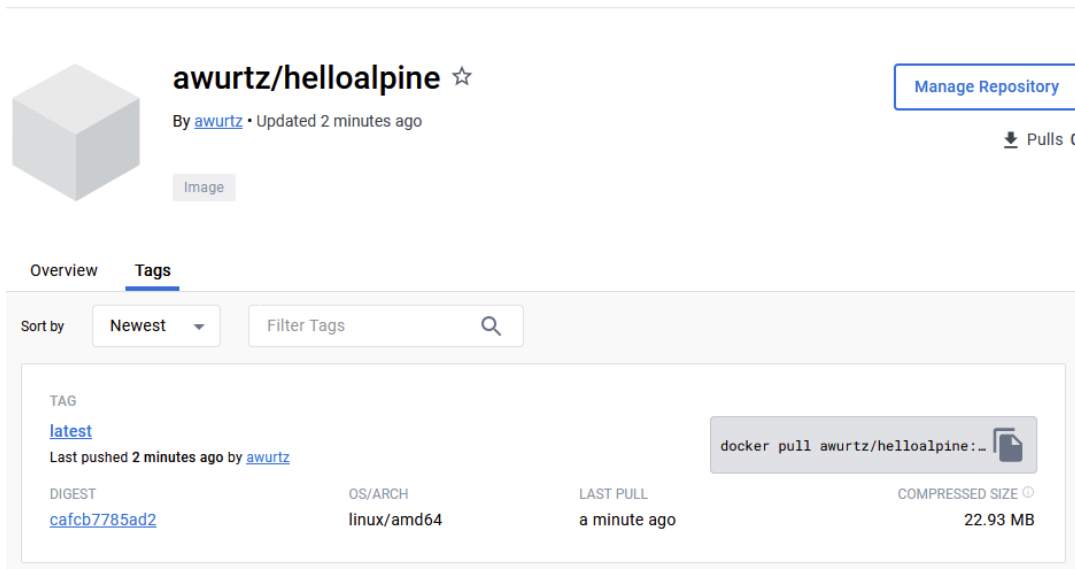The alpine-based container probably doesn't include bash.

Screenshot of output of `docker exec -t helloa/bin/sh`, `cd /etc/alpine-release` and `ps -ef`

```
awurtz@course-vm2:~/cs430-src/04_container_dockerhub$ docker exec -it helloa /bin/sh
/app # cd /etc/alpine-release
/bin/sh: cd: can't cd to /etc/alpine-release: Not a directory
/app # ls
Dockerfile.alpine  __pycache__          gbmodel          requirements.txt    static
Dockerfile.ubuntu  app.py               index.py         sign.py             templates
/app # ps -ef
PID    USER      TIME  COMMAND
    1 root       0:00 python3 app.py
    7 root       0:01 /usr/local/bin/python3 app.py
   16 root       0:00 /bin/sh
   24 root       0:00 ps -ef
/app # ▮
```

Alpine Docker Image on Docker Hub

awurtz/helloalpine ☆

By awurtz • Updated 2 minutes ago

Manage Repository

⬇ Pulls 0

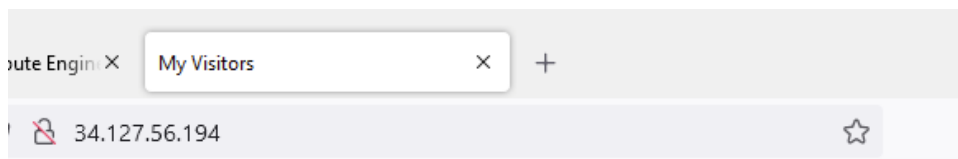Image

Overview   **Tags**

Sort by   Newest ▾   Filter Tags 🔍

TAG

latest

Last pushed **2 minutes ago** by awurtz

`docker pull awurtz/helloalpine:…` 📄

DIGEST	OS/ARCH	LAST PULL	COMPRESSED SIZE ⓘ
cafcb7785ad2	linux/amd64	a minute ago	22.93 MB

Take a screenshot that includes the VM's external IP address for your lab notebook

ute Engin ✕   My Visitors   ✕   +
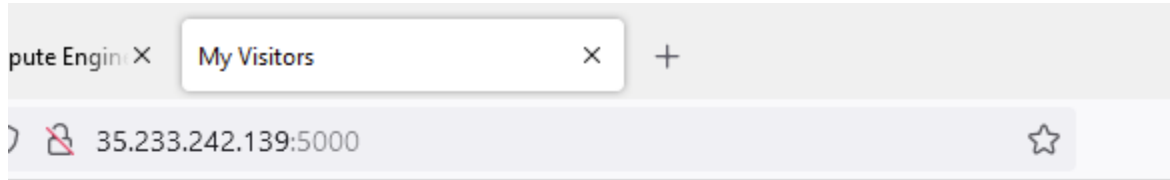
🔓 34.127.56.194   ☆

Guestbook

Sign here

Entries

Addison <awurtz@pdx.edu>
signed on 2023-10-23
Hello Compute Engine + Docker!

Addison Wurtz
CS 530
notebooks/Week4

Take a screenshot of the entry that includes the VM's external IP address
for your lab notebook