

云计算实验二报告

作业 1：

```
[qiushisun@10-23-230-239 root]$ sudo docker run hello-world
Unable to find image 'hello-world:latest' locally
latest: Pulling from library/hello-world
0e03bdcc26d7: Pull complete
Digest: sha256:4cf9c47f86df71d48364001ede3a4fcd85ae80ce02ebad74156906caff5378bc
Status: Downloaded newer image for hello-world:latest

Hello from Docker!
This message shows that your installation appears to be working correctly.

[qiushisun@10-23-230-239 root]$ docker pull busybox
Using default tag: latest
Got permission denied while trying to connect to the Docker daemon socket at unix:///var/run/docker.sock: Post http://%2Fvar%2Fdocker.sock/v1.40/images/create?fromImage=busybox&tag=latest: dial unix /var/run/docker.sock: connect: permission denied
[qiushisun@10-23-230-239 root]$ sudo docker pull busybox
Using default tag: latest
latest: Pulling from library/busybox
df8698476c65: Pull complete
Digest: sha256:d366a4665ab44f0648d7a00ae3fae139d55e32f9712c67accd604bb55df9d05a
Status: Downloaded newer image for busybox:latest
docker.io/library/busybox:latest
[qiushisun@10-23-230-239 root]$ docker images
Got permission denied while trying to connect to the Docker daemon socket at unix:///var/run/docker.sock: Get http://%2Fvar%2Fdocker.sock/v1.40/images/json: dial unix /var/run/docker.sock: connect: permission denied
[qiushisun@10-23-230-239 root]$ sudo docker images
REPOSITORY          TAG                 IMAGE ID            CREATED             SIZE
busybox              latest              6858809bf669        4 weeks ago         1.23MB
hello-world          latest              bf756fb1ae65        9 months ago         13.3kB
[qiushisun@10-23-230-239 root]$ sudo docker run busybox
[qiushisun@10-23-230-239 root]$ sudo docker run busybox echo "hello from busybox"
hello from busybox
[qiushisun@10-23-230-239 root]$
```

作业 2：

1.sudo docker search centos

```
[qiushisun@10-23-230-239 root]$ sudo docker search centos
NAME                DESCRIPTION                STARS     OFFICIAL    AUTOMATED
centos               The official build of CentOS.       6225      [OK]
ansible/centos7-ansible  Ansible on Centos7          132
console/centos-xfce-vnc  Centos container with "headless" VNC session... 122
jdeathe/centos-ssh      OpenSSH / Supervisor / EPEL/IUS/SCL Repos - ... 115
centos/systemd          systemd enabled base container.      86
centos/mysql-57-centos7 MySQL 5.7 SQL database server        83
```

2.sudo docker pull centos

```
[qiushisun@10-23-230-239 root]$ sudo docker pull centos
Using default tag: latest
latest: Pulling from library/centos
3c72a8ed6814: Pull complete
Digest: sha256:76d24f3ba3317fa945743bb3746fbaf3a0b752f10b10376960de01da70685fbd
Status: Downloaded newer image for centos:latest
docker.io/library/centos:latest
[qiushisun@10-23-230-239 root]$ ps
  PID TTY          TIME CMD
  2014 pts/0    00:00:00 bash
  3159 pts/0    00:00:00 ps
[qiushisun@10-23-230-239 root]$ sudo docker images
REPOSITORY          TAG                 IMAGE ID            CREATED             SIZE
busybox              latest              6858809bf669        4 weeks ago         1.23MB
centos               latest              0d120b6ccaa8        8 weeks ago         215MB
hello-world          latest              bf756fb1ae65        9 months ago         13.3kB
```

3.sudo docker run centos

```
[qiushisun@10-23-230-239 root]$ sudo docker run centos
[qiushisun@10-23-230-239 root]$ ps
  PID TTY          TIME CMD
 2014 pts/0    00:00:00 bash
 3251 pts/0    00:00:00 ps
[qiushisun@10-23-230-239 root]$ sudo docker images
REPOSITORY          TAG                 IMAGE ID            CREATED             SIZE
busybox              latest              6858809bf669       4 weeks ago        1.23MB
centos               latest              0d120b6ccaa8       8 weeks ago        215MB
hello-world          latest              bf756fb1ae65       9 months ago       13.3kB
[qiushisun@10-23-230-239 root]$ sudo docker ps -a
CONTAINER ID        IMAGE               COMMAND             CREATED             STATUS              PORTS              NAMES
cc784f9ca9b4       centos             "/bin/bash"        24 seconds ago     Exited (0) 23 seconds ago                       sleepy_swirles
95c0e2d4723f       busybox            "sh"               7 minutes ago      Exited (0) 7 minutes ago                       ecstatic_dhawan
3255336789c2       hello-world        "/hello"           18 minutes ago     Exited (0) 18 minutes ago                       happy_montalcini
```

4.sudo docker run -t -i centos /bin/bash

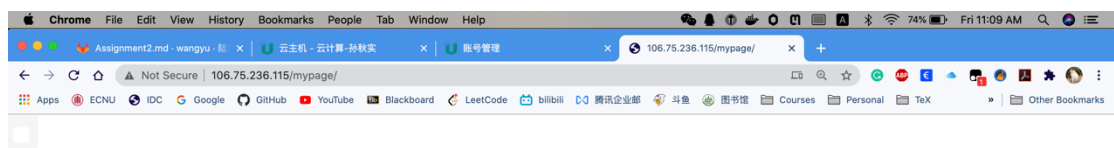
```
[qiushisun@10-23-230-239 root]$ sudo docker run -t -i centos /bin/bash
[root@d57d914fa8e7 /]# lscpu
Architecture:          x86_64
CPU op-mode(s):        32-bit, 64-bit
Byte Order:             Little Endian
CPU(s):                 1
On-line CPU(s) list:   0
Thread(s) per core:    1
Core(s) per socket:    1
Socket(s):              1
NUMA node(s):          1
Vendor ID:              GenuineIntel
CPU family:             6
Model:                  61
Model name:             Intel Core Processor (Broadwell, no TSX)
Stepping:               2
CPU MHz:                2194.916
BogoMIPS:               4389.83
Hypervisor vendor:     KVM
Virtualization type:    full
L1d cache:              32K
L1i cache:              32K
L2 cache:               4096K
L3 cache:               16384K
NUMA node0 CPU(s):     0
```

5.lscpu

作业 3：

(把示例中的容器关掉再开始)

```
[qiushisun@10-23-230-239 ~]$ docker ps -a
CONTAINER ID        IMAGE               COMMAND             CREATED             STATUS              PORTS              NAMES
28b62088e40d       cloud_computing/static_site  "./wrapper.sh"     About an hour ago   Exited (0) About an hour ago                       epic_bhaskara
d57d914fa8e7       centos             "/bin/bash"        2 hours ago        Exited (0) 2 hours ago                       pedantic_goldberg
cc784f9ca9b4       centos             "/bin/bash"        2 hours ago        Exited (0) 2 hours ago                       sleepy_swirles
95c0e2d4723f       busybox            "sh"               2 hours ago        Exited (0) 2 hours ago                       ecstatic_dhawan
3255336789c2       hello-world        "/hello"           3 hours ago        Exited (0) 3 hours ago                       happy_montalcini
[qiushisun@10-23-230-239 ~]$ sudo docker run -d -p 80:80 -p 443:443 -v /var/html:/usr/share/nginx/html/mypage --name 10185501402 cloud_computing/static_site
e4dc9a4333d73e59415e6bc7f1cf048d89d81fa1b24d91b2d6f71c7cd4661660
[qiushisun@10-23-230-239 ~]$ vi /var/html/mypage.html
[qiushisun@10-23-230-239 ~]$ vi /var/html/index.html
```



Hello Docker!

This is being served from a **docker** container running Nginx.

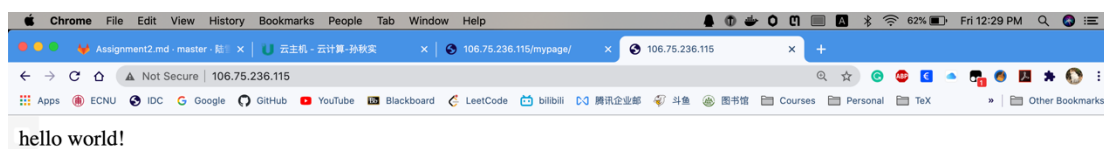
my id is 10185501502,my name is QiushiSun

作业 4：

```
Build an image from a Dockerfile
[qiushisun@10-23-230-239 demo]$ docker build -t qiushisun/demo .
Sending build context to Docker daemon 3.072kB
Step 1/7 : FROM cloud_computing/python:latest
latest: Pulling from cloud_computing/python
57df1a1f1ad8: Pull complete
71e126169501: Pull complete
1af28a55c3f3: Pull complete
03f1c9932170: Pull complete
65b3db15f518: Pull complete
3e3b8947ed83: Pull complete
f156949921a1: Pull complete
1c1931813093: Pull complete
51fff639b6bf: Pull complete
Digest: sha256:f6c7e4926b34f95502fa09aff641931db5f26a98a8f1699a44b79dc4f2aaace9
Status: Downloaded newer image for cloud_computing/python:latest
--> bb3f31371d67d
Step 2/7 : LABEL description="Dockerfile Demo for EGNU"
--> Running in ebaa34c3bfc6
Removing intermediate container ebaa34c3bfc6
--> 8b0e582af635
Step 3/7 : RUN pip install flask -i https://pypi.tuna.tsinghua.edu.cn/simple
--> Running in 1e38bee0bda
Looking in indexes: https://pypi.tuna.tsinghua.edu.cn/simple
Collecting flask
  Downloading https://pypi.tuna.tsinghua.edu.cn/packages/f2/28/2a03252dfb9ebf377f40fba6a7841b47083260bf8bd8e737b0c6952df83f/Flask-1.1.2-py2.py3-none-any.whl (94 kB)
Collecting click<=5.1
  Downloading https://pypi.tuna.tsinghua.edu.cn/packages/d2/3d/fa76db83bf75c4f8d338c2fd15c8d33fdd7ad23a9b5e57eb6c5de26b430e/click-7.1.2-py2.py3-none-any.whl (82 kB)
Collecting itsdangerous<=0.24
  Downloading https://pypi.tuna.tsinghua.edu.cn/packages/76/ae/44b03b253d6fade317f32c24d100b3b35c2239807046a4c953c7b89fa49e/itsdangerous-1.1.0-py2.py3-none-any.whl (16 kB)
Collecting Werkzeug<=0.15
  Downloading https://pypi.tuna.tsinghua.edu.cn/packages/cc/94/5f7079a0e00bd6863ef8f1da638721e9da21e5bacee597595b318f71d62e/Werkzeug-1.0.1-py2.py3-none-any.whl (298 kB)
Collecting Jinja2<=2.10.1
  Downloading https://pypi.tuna.tsinghua.edu.cn/packages/30/9e/f663a2aa66a09d838042ae1a2c5659828bb9b41ea3a6efa20a20fd92b121/Jinja2-2.11.2-py2.py3-none-any.whl (125 kB)
Collecting MarkupSafe<=0.23
  Downloading https://pypi.tuna.tsinghua.edu.cn/packages/4b/20/f6d7648c81cb84815d0be935d5c74cd1cc0239e43eadb1a61062d34b6543/MarkupSafe-1.1.1-cp38-cp38-manylinux1_x86_64.whl (32 kB)
```

```
[qiushisun@10-23-230-239 demo]$ docker images
REPOSITORY          TAG                 IMAGE ID            CREATED             SIZE
qiushisun/demo       latest             798f6512cafb       About a minute ago 892MB
cloud_computing/python latest             bb3f31371d67d      2 weeks ago        882MB
busybox              latest             6858809bf669       4 weeks ago        1.23MB
centos                latest             0d120b6ccaa8       8 weeks ago        215MB
hello-world          latest             bf756fb1ae65       9 months ago       13.3kB
cloud_computing/static_site latest             f01030e1dacf3      4 years ago        134MB
[qiushisun@10-23-230-239 demo]$
```

```
[qiushisun@10-23-230-239 ~]$ docker ps -a
CONTAINER ID        IMAGE               COMMAND             CREATED             STATUS              PORTS              NAMES
4e473aa12c06       qiushisun/demo     "/bin/sh -c 'python ..." 34 minutes ago     Up 34 minutes      5000/tcp            elastic_elgamal
e4dc9a4333d7       cloud_computing/static_site "/.wrapper.sh"     About an hour ago   Exited (0) About a minute ago 10185501402        epic_bhaskara
28b62088e40d       cloud_computing/static_site "/.wrapper.sh"     3 hours ago        Exited (0) 3 hours ago 10185501402        epic_bhaskara
d57d914fa8e7       centos              "/bin/bash"        4 hours ago        Exited (0) 4 hours ago pedantic_goldberg
cc784f9ca9b4       centos              "/bin/bash"        4 hours ago        Exited (0) 4 hours ago sleepy_swirles
95c0e2d4723f       busybox             "sh"               4 hours ago        Exited (0) 4 hours ago ecstatic_dhawan
3255336789c2       hello-world         "/hello"           4 hours ago        Exited (0) 4 hours ago happy_montalcini
[qiushisun@10-23-230-239 ~]$ docker run -d -p 80:5000 -p 443:443 --name qiushisun qiushisun/demo
fcff2d4dd5fba9e15bf451a80e34a550041c51bcc4e976dbc9a44f59fb80be94
[qiushisun@10-23-230-239 ~]$
```



Remarks:

- 1.修改配置文件一定要 restart
- 2.作业 3 和作业 4 都映射到云主机，再使用用外网 IP 访问