Lab 6 – External Mounts

Task A – Use a bind mount to modify a configuration

Prerequisites:

- An Ubuntu 20.04 VM with docker and git installed.

Steps:

1) Connect to the provided Ubuntu 20.04 Virtual Machine.

2) Clone the task repository: agray998/qa-docker-ex06a: Files for QADOCKER exercise 06a (github.com).

3) Launch a container based on the provided image:

```
docker run -d -e MYSQL_ROOT_PASSWORD=<password of your choosing> --name mysql
agray998/qa-docker-ex-06a
```

4) Exec into the container and attempt to query the database – this should fail due to the secure_file_priv setting in the default my.cnf file:

```
docker exec -it mysql mysql -u root -p
*enter password when prompted*
SELECT * FROM ex06a.ex06a INTO OUTFILE '/home/student/ex06a.csv';
```

5) Stop and remove this container. Launch a new container but this time mount the provided my.cnf file:

```
docker run -d -e MYSQL_ROOT_PASSWORD=<password of your choosing> --mount
type=bind,source=$(pwd)/my.cnf,target=/etc/my.cnf --name mysql agray998/qa-
docker-ex-06a
```

6) Exec into the new container and attempt the same query as before – it should now work.

7) To clean-up: 'docker stop mysql && docker rm mysql; docker rmi agray998/qa-docker-ex-06a'.

Task B – Use a volume mount to persist and share data

Prerequisites:

- An Ubuntu 20.04 VM with docker and git installed.

Steps:

8) Connect to the provided Ubuntu 20.04 Virtual Machine.

9) Create a volume called ex06b.

10) Launch a container based on the provided mysql image from earlier – mount the volume you created to this container:

```
docker run -d -e MYSQL_ROOT_PASSWORD=<password of your choosing> --name mysql
-v ex06b:/var/lib/mysql agray998/qa-docker-ex-06a
```

11) Stop and remove this container. Launch a new container from the base mysql:5.7 image with the same volume mounted:

```
docker run -d -e MYSQL_ROOT_PASSWORD=<password of your choosing> -v
ex06b:/var/lib/mysql --name mysql mysql:5.7
```

12) Exec into the new container and attempt to query the provided database:

```
docker exec -it mysql mysql -u root -p
*enter password when prompted*
SELECT * FROM ex06a.ex06a;
```

Note that the data is available even though this container was built from the base mysql image, which does not have sample data built in.

13) To clean-up: 'docker stop mysql && docker rm mysql; docker rmi agray998/qa-docker-ex-06a'.