

Docker volume creation

1.Create volume

```
ubuntu $ docker volume create gy_volume  
gy_volume
```

2.Docker inspect volume

```
ubuntu $ docker inspect gy_volume  
[  
  {  
    "CreatedAt": "2024-07-09T09:50:52Z",  
    "Driver": "local",  
    "Labels": null,  
    "Mountpoint": "/var/lib/docker/volumes/gy_volume/_data",  
    "Name": "gy_volume",  
    "Options": null,  
    "Scope": "local"  
  }  
]
```

3.Next will run the Docker

```
ubuntu $ docker run -d -p 3306:3306 -e MYSQL_ROOT_PASSWORD=gowtham45 --mount source=gy_volume,target=/var/lib/mysql mysql
Unable to find image 'mysql:latest' locally
latest: Pulling from library/mysql
d9a40b27c30f: Pull complete
d948328c7651: Pull complete
c1e267313ede: Pull complete
7478f013875a: Pull complete
9221a2250289: Pull complete
d1f57baa52d5: Pull complete
35c3d30e8624: Pull complete
3d4d1dd0cca6: Pull complete
08bfe3f7d1c5: Pull complete
537e7daeeea3: Pull complete
Digest: sha256:72a37ddc9f839cf84f1f6815fb31ba26f37f4c200b90e49607797480e3be446
Status: Downloaded newer image for mysql:latest
7a775d6abad06eeb32f7793920b1f89e4368e78c87f255f3072e3de34af461ea
```

4.Next will check docker ps

```
ubuntu $ docker ps
```

CONTAINER ID	IMAGE	COMMAND	CREATED	STATUS
PORTS			NAMES	
7a775d6abad0	mysql	"docker-entrypoint.s..."	22 seconds ago	Up 20 seconds
0.0.0.0:3306->3306/tcp, :::3306->3306/tcp, 33060/tcp			magical_khorana	

5.Next change the Directory and path to be added and list

```
ubuntu $ cd /var/lib/docker/volumes/gy_volume/_data
ubuntu $ ls
```

'#ib_16384_0.dblwr'	binlog.index	ibtmp1	public_key.pem
'#ib_16384_1.dblwr'	ca-key.pem	mysql	server-cert.pem
'#innodb_redo'	ca.pem	mysql.ibd	server-key.pem
'#innodb_temp'	client-cert.pem	mysql.sock	sys
auto.cnf	client-key.pem	mysql_upgrade_history	undo_001
binlog.000001	ib_buffer_pool	performance_schema	undo_002
binlog.000002	ibdata1	private_key.pem	

6.Next change Directory mysql and also listed

```
ubuntu $ cd mysql
ubuntu $ ls
general_log.CSM  general_log_216.sdi  slow_log.CSV
general_log.CSV  slow_log.CSM         slow_log_217.sdi
```

7.Create the file in mysql

```
ubuntu $ touch file45
ubuntu $ ls
file45          general_log.CSV      slow_log.CSM  slow_log_217.sdi
general_log.CSM general_log_216.sdi  slow_log.CSV
```

8.First will check on docker ps and again remove the container

```
ubuntu $ docker ps
CONTAINER ID   IMAGE     COMMAND                  CREATED        STATUS        PORTS
7a775d6abad0   mysql    "docker-entrypoint.s..." About a minute ago Up About a minute 0.0.0.0:3306->3306/tcp, :::3306->3306/tcp, 33060/tcp
ubuntu $ docker rm -f 7a775d6abad0
7a775d6abad0
```

9.Again create the New container and will check the command docker ps

```
ubuntu $ docker run -d -p 3307:3306 --name gowtham -e MYSQL_ROOT_PASSWORD=gowtham
45 --mount source=gy_volume,target=/var/lib/mysql mysql
d37795eac97d78f36bd727104d5ef8de8395845c8d375d31b10fc38e8e241fbe
ubuntu $ docker ps
CONTAINER ID   IMAGE     COMMAND                  CREATED        STATUS        PORTS
d37795eac97d   mysql    "docker-entrypoint.s..." 6 seconds ago Up 5 seconds 33060/tcp, 0.0.0.0:3307->3306/tcp, :::3307->3306/tcp
gowtham
```

**10.Next will change the directory and this path
/var/lib/docker/volumes/gy_volume/_data and again to ls**

```
ubuntu $ cd /var/lib/docker/volumes/gy_volume/_data
ubuntu $ ls
'#ib_16384_0.dblwr'  binlog.000003  ibdata1        private_key.pem
'#ib_16384_1.dblwr'  binlog.index   ibtmp1         public_key.pem
'#innodb_redo'       ca-key.pem     mysql          server-cert.pem
'#innodb_temp'       ca.pem         mysql.ibd      server-key.pem
auto.cnf             client-cert.pem mysql.sock      sys
binlog.000001        client-key.pem mysql_upgrade_history undo_001
binlog.000002        ib_buffer_pool performance_schema undo_002
```

**11.Next will change the directory mysql and ls to already will
create the file to be viewed**

```
ubuntu $ cd mysql
ubuntu $ ls
file45          general_log.CSV  slow_log.CSM  slow_log_217.sdi
general_log.CSM general_log_216.sdi slow_log.CSV
```

2.Directory Methods

1.Create a directory and change the directory and ls

```
ubuntu $ mkdir /ak_backup
ubuntu $ cd /ak_backup/
ubuntu $ ls
```

2.Next will run the docker and pull it

```
ubuntu $ docker run -d -p 3306:3306 -e MYSQL_ROOT_PASSWORD=gowtham45 -v /ak_backup:/var/lib/mysql mysql
Unable to find image 'mysql:latest' locally
latest: Pulling from library/mysql
d9a40b27c30f: Pull complete
d948328c7651: Pull complete
c1e267313ede: Pull complete
7478f013875a: Pull complete
9221a2250289: Pull complete
d1f57baa52d5: Pull complete
35c3d30e8624: Pull complete
3d4d1dd0cca6: Pull complete
08bfe3f7d1c5: Pull complete
537e7daeeea3: Pull complete
Digest: sha256:72a37ddc9f839cfd84f1f6815fb31ba26f37f4c200b90e49607797480e3be446
Status: Downloaded newer image for mysql:latest
e63c6bb6a937097c67f46d3c375a15e5937ae7ffe7fb1a143d81e6a1e640bf69
```

3.And change the directory and ls

```
ubuntu $ cd /ak_backup/
ubuntu $ ls
'#ib_16384_0.dblwr'  binlog.index      ibtmp1            public_key.pem
'#ib_16384_1.dblwr'  ca-key.pem        mysql             server-cert.pem
'#innodb_redo'       ca.pem            mysql.ibd         server-key.pem
'#innodb_temp'       client-cert.pem   mysql.sock        sys
auto.cnf             client-key.pem    mysql_upgrade_history undo_001
binlog.000001        ib_buffer_pool    performance_schema undo_002
binlog.000002        ibdata1           private_key.pem
```

4.Next docker ps and execute to bash

```
ubuntu $ docker ps
CONTAINER ID   IMAGE      COMMAND                  CREATED        STATUS
PORTS
e63c6bb6a937   mysql     "docker-entrypoint.s..." 47 seconds ago Up 45 seconds
0.0.0.0:3306->3306/tcp, :::3306->3306/tcp, 33060/tcp  sad_pascal
ubuntu $ docker exec -it e63c6bb6a937 bash
```

```
bash-5.1#
```


6.And mysql -u root -pgowtham45 and check show databases; and create databases name;

```
bash-5.1# mysql -u root -pgowtham45
mysql: [Warning] Using a password on the command line interface can be insecure.
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 8
Server version: 9.0.0 MySQL Community Server - GPL

Copyright (c) 2000, 2024, Oracle and/or its affiliates.

Oracle is a registered trademark of Oracle Corporation and/or its
affiliates. Other names may be trademarks of their respective
owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.
```

```
mysql> show databases;
+-----+
| Database                |
+-----+
| information_schema      |
| mysql                   |
| performance_schema      |
| sys                     |
+-----+
4 rows in set (0.01 sec)

mysql> create database gowthamgy
      -> create database gowthamgy;
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that c
orresponds to your MySQL server version for the right syntax to use near 'create
database gowthamgy' at line 2
mysql> create database gowthamgy;
Query OK, 1 row affected (0.02 sec)

mysql> create database gowthamak;
```

```
mysql> show databases;
+-----+
| Database |
+-----+
| gowthamak |
| gowthamgy |
| information_schema |
| mysql |
| performance_schema |
| sys |
+-----+
6 rows in set (0.00 sec)

mysql> ^C
mysql> ^DBye
bash-5.1#
bash-5.1# exit
exit
```

7.Next change the directory and list it

```
ubuntu $ cd /ak_backup/
ubuntu $ ls
'#ib_16384_0.dblwr'  ca-key.pem      ibtmp1          server-cert.pem
'#ib_16384_1.dblwr'  ca.pem          mysql           server-key.pem
'#innodb_redo'       client-cert.pem mysql.ibd        sys
'#innodb_temp'       client-key.pem  mysql.sock      undo_001
auto.cnf             gowthamak      mysql_upgrade_history  undo_002
binlog.000001        gowthamgy      performance_schema
binlog.000002        ib_buffer_pool private_key.pem
binlog.index         ibdata1         public_key.pem
```

