

KodeFlix Originals

studio.kodecloud.com/labs/docker/docker_storage

Back to Domain

Docker Storage

Understand Docker storage concepts including volumes and bind mounts.

Intermediate

60-90 min

1 / 10

Next →

What location are the files related to the docker containers and images stored?

/opt/docker

/etc/docker

/var/lib/docker

/tmp/docker

Welcome to the KodeCloud Hands-On lab

All rights reserved

```
~ → echo var/lib/docker
var/lib/docker
~ → 
```

ENG 03:51 AM

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We have just written some data into the database. To view the information we wrote, run the `get-data.sh` script available in the `/root` directory. How many customers data have been written to the database?

Command: `sh get-data.sh`

30

20

10

40

```
3 Rowan 199-8663 consectetuer.adipiscing.elit@Sedmalesuada.co.uk
4 Alisa 220-6017 elementum.sem.vitae@enimMauris.edu
5 Ella 731-0337 fermentum@nec.net
6 Tiger 658-4480 quis.diam@odiovelest.net
7 Felix 1-274-848-3378 Mauris.vel@arcu.com
8 Karina 1-398-796-3451 sagittis.semper@odioapurus.co.uk
9 Davis 605-8539 venenatis.vel@risusDonecnihb.com
10 Mohammad 1-590-174-1489 ornare.sagittis.felis@natoque.ca
11 Zane 362-1770 Aenean.euismod@condimentum.co.uk
12 Piper 1-231-386-6903 nunc.sed.pede@nascetur.ca
13 Marshall 1-383-729-4990 Cras.interdum.Nunc@neceuismod.ca
14 Zena 241-6641 Fusce.mollis.Duis@lobortis.org
15 Abdul 1-748-387-9935 eget.lacus.Mauris@Crasvehicula.com
16 Chase 1-401-241-9169 ante.dictum.mi@nascetur.org
17 Zahir 921-0663 non@nonummyutmolestie.edu
18 Brenda 1-691-909-5827 Quisque.ac@magnaCras.co.uk
19 Laura 1-562-983-9565 Quisque.ornare.tortor@sollicitudinadipiscing.ca
20 Madison 1-348-737-0587 Quisque.varius@Intinciduntcongue.org
21 Tanek 991-6278 dignissim.magna@Pellentesqueutipsun.net
22 Dakota 893-0792 Nullam.enim.Sed@nulla.net
23 Boris 1-297-302-5792 non.sollicitudin@eileifendegestasSed.co.uk
24 Celeste 723-6729 mauris.rhonus@eunulla.edu
25 Connor 1-203-901-7531 et@loremipsumsodales.edu
26 Perry 1-756-607-9187 eros.turpis@tristiquepharetra.co.uk
27 Hayfa 1-609-407-3019 non.lobortis.quis@malesuadafringilla.net
28 Todd 343-0454 id.enat@arcu.org
29 Fuller 881-7273 non.feugiat.nec@adipiscingelit.net
30 Rama 1-927-605-0610 nonummy.ultrices.ornare@malesuada.co.uk
```

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Task Hint AI Assistant (Beta) 53:18

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Run a `mysql` container named `mysql-db` using the `mysql` image. Set database password to `db_pass123`.

Note: Remember to run it in the detached mode.

Check

Next →

Task completed

Correct Password set

lib/docker/overlay2 → `docker run -d --name mysql-db -e MYSQL_ROOT_PASSWORD=db_pass123 mysql`

7235f62a64f7cfbc5a660bc7c11152c4a40d5755eb296c11f3459e480801b35

lib/docker/overlay2 →

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Docker Storage

Understand Docker storage concepts including volumes and bind mounts.

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Next →

The database crashed. Are you able to view the data now?

Use the same command to try and view data. Try to find the container.

YES

NO

```
binlog.000001      foo      mysql_upgrade_history      undo_001
binlog.000002      ib_buffer_pool      performance_schema      undo_002

volumes/7878ce68399c107c2d5a02d0db18ff9459c2d0f6eade028c27962ae1c5cb6b04/_data → cd mysql

7878ce68399c107c2d5a02d0db18ff9459c2d0f6eade028c27962ae1c5cb6b04/_data/mysql → ls
general_log.CSM      general_log_216.sdi      slow_log.CSV
general_log.CSV      slow_log.CSM      slow_log_217.sdi

7878ce68399c107c2d5a02d0db18ff9459c2d0f6eade028c27962ae1c5cb6b04/_data/mysql → docker run -d
--name mysql-db -v 7878ce68399c107c2d5a02d0db18ff9459c2d0f6eade028c27962ae1c5cb6b04:/var/lib
/mysql -e MYSQL_ROOT_PASSWORD=db_pass123 mysql

89508ee742e557c339cd3360487d0ecae7c2c2541f89a4896936ed496e2ee7f7

7878ce68399c107c2d5a02d0db18ff9459c2d0f6eade028c27962ae1c5cb6b04/_data/mysql → docker ps
CONTAINER ID      IMAGE      COMMAND      CREATED      STATUS      PORTS
89508ee742e5      mysql      "docker-entrypoint.s..."      16 seconds ago      Up 13 seconds      3306/tcp,
33060/tcp      mysql-db

7878ce68399c107c2d5a02d0db18ff9459c2d0f6eade028c27962ae1c5cb6b04/_data/mysql → cd /root

~ → ls
get-data.sh

~ → sh get-data.sh
mysql: [Warning] Using a password on the command line interface can be insecure.
id      Name      Phone      Email
1      Kareem      130-5655      Duis.volutpat.nunc@quamCurabitur.org
```

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Docker Storage

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Next →

Run a mysql container again, but this time map a volume to the container so that the data stored by the container is stored at `/opt/data` on the host.

Use the same name : `mysql-db` and same password: `db_pass123` as before. Mysql stores data at `/var/lib/mysql` inside the container.

Check

Next →

Task completed

Correct Password set

Host: /opt/data

Container: /var/lib/mysql

```
~ → docker run -d --name mysql-db -v /opt/data:/var/lib/mysql -e MYSQL_ROOT_PASSWORD=db_pass
123 mysql
ee53688e7e58cc27114d99e7cb73a7e91316a8123a9a4315cff31be0f53cb05b

~ →
```

KodeFlex Originals x mysql - Official Image | Docker x +

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Back to Domain Docker Storage Understand Docker storage concepts including volumes and bind mounts. Intermediate 60-90 min

Task AI Assistant (Beta) 27:33

8/10 Next →

We have now re-written data again. Run the `get-data.sh` script to ensure data is present.

Command: `sh get-data.sh`

Ok

Terminal 1

```
~ → docker run -d --name mysql-db -v /opt/data:/var/lib/mysql -e MYSQL_ROOT_PASSWORD=db_pass123 mysql
ee53688e7e58cc27114d99e7cb73a7e91316a8123a9a4315cff31be0f53cb05b

~ → ls
get-data.sh

~ → sh get-data.sh
mysql: [Warning] Using a password on the command line interface can be insecure.
id      Name      Phone    Email
1       Kareem    138-5655 Duis.volutpat.nunc@quamCurabitur.org
2       Ruby      1-584-149-0770 Nulla.tempor@vitaorciPhasellus.org
3       Rowan     199-8663  consectetur.adipiscing.elit@Sedmalesuada.co.uk
4       Alisa     228-6017  elementum.sem.vitae@enimMauris.edu
5       Ella      731-0337  fermentum@nec.net
6       Tiger     658-4480  quis.diam@odioveltest.net
7       Felix     1-274-848-3378 Mauris.vel@arcu.com
8       Karina    1-398-786-3451 sagittis.semper@odioapurus.co.uk
9       Davis     605-8539  venenatis.vel@risusDonec nibh.com
10      Mohammad  1-590-174-1489 ornare.sagittis.felis@natoque.ca
11      Zane      362-1770  Aenean.euismod@condimentum.co.uk
12      Piper     1-231-386-6903 nunc.sed.pede@nascetur.ca
13      Marshall  1-383-729-4990 Cras.interdum.Nunc@neceuismod.ca
14      Zena      241-6641  Fusce.mollis.Duis@lobortis.org
15      Abdul     1-748-387-9935 eget.lacus.Mauris@Crasvehicula.com
16      Chase     1-401-241-9169 ante.dictum.mi@nascetur.org
17      Zahir     921-0663  non@nonummyutmolestie.edu
18      Brenda    1-691-909-5827 Quisque.ac@magnaCras.co.uk
19      Laura     1-562-983-9565 Quisque.ornare.tortor@sollicitudinadipiscing.ca
```

KodeFlex Originals x mysql - Official Image | Docker x +

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9/10 Next →

Disaster strikes.. again! And the database crashed again. But this time we have the data stored at `/opt/data` directory. Re-deploy a new mysql instance using the same options as before.

Just run the same command as before. Here it is for your convenience: `docker run -v /opt/data:/var/lib/mysql -d --name mysql-db -e MYSQL_ROOT_PASSWORD=db_pass123 mysql`

Check

Next →

- Task completed
- Correct Password set
- Host: /opt/data
- Container: /var/lib/mysql

Terminal 1

```
~ → docker run -v /opt/data:/var/lib/mysql -d --name mysql-db -e MYSQL_ROOT_PASSWORD=db_pass123 mysql
F4e47b9a1da70eee25ac34401852678aa5c3e21950522ae0b5137aa15368d0b9

~ →
```

Kodeflix Originals x mysql - Official Image | Docker x +

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Task AI Assistant (Beta) 25:33

10 / 10 Next →

Fetch data and make sure it is present.
command: `sh get-data.sh`

Ok

Terminal 1

```
~ → docker run -v /opt/data:/var/lib/mysql -d --name mysql-db -e MYSQL_ROOT_PASSWORD=db_pass123 mysql
f4e47b9a1da70eee25ac34401052678aa5c3e21950522ae0b5137aa15368d0b9

~ → sh get-data.sh
mysql: [Warning] Using a password on the command line interface can be insecure.
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4       Alisa     228-6017    elementum.sem.vitae@enimMauris.edu
5       Ella      731-0337    fermentum@nec.net
6       Tiger     658-4480    quis.diam@odiovellest.net
7       Felix     1-274-848-3378 Mauris.vel@arcu.com
8       Karina    1-398-796-3451 sagittis.semper@odioapurus.co.uk
9       Davis     605-8539    venenatis.vel@riusDonec nibh.com
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12      Piper     1-231-386-6903 nunc.sed.pede@nascetur.ca
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14      Zena      241-6641    Fusce.mollis.Duis@lobortis.org
15      Abdul     1-748-387-9935 eget.lacus.Mauris@Crasvehicula.com
16      Chase     1-401-241-9169 ante.dictum.mi@nascetur.org
17      Zahir     921-0663    non@nonummyutmolestie.edu
18      Brenda    1-691-909-5827 Quisque.ac@magnaCras.co.uk
19      Laura     1-562-983-9565 Quisque.ornare.tortor@sollicitudinadipiscing.ca
20      Madison   1-348-737-0587 Quisque.varius@Intinciduntcongue.org
21      Tanek     991-6278    dignissim.magna@Pellentesqueutisum.net
22      Dakota    893-0792    Nullam.enim.Sed@nulla.net
```

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CONGRATULATIONS!!!!
You have successfully completed the challenge.

End lab session

Terminal 1

```
~ →
```