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Back to Domain Docker Networking Learn about Docker networking, bridge networks, and container communication. Intermediate 60-90 min

Task Hint AI Assistant (Beta) 53:54

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Explore the current setup and identify the number of networks that exist on this system.

1

2

4

3

Terminal 1

```
~ → docker network ls
NETWORK ID          NAME                DRIVER              SCOPE
e2f6a2c7e385        bridge             bridge             local
a9ddd20e58a2        host               host               local
38672f85baf9        none              null              local

~ → docker network ls -q | wc -l
3

~ →
```

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What is the ID associated with the bridge network?

e2f6a2c7e3857627c74b5b6785e16189f38b336d
c5c7d1f5d4eebee8fda36177

fb9c1a74a36514f6f2d767eee7be024a0ffd40b6cf
208886de42ee8003f5a6a6

d6d852f6099426dadfdad90852f13b9a8695e93
d20f028de939baf2c047faf85

Terminal 1

```
~ → docker network ls | grep bridge
e2f6a2c7e385        bridge             bridge             local

~ →
```

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Next →

We just ran a container named `alpine-1`. Identify the network it is attached to.

none

bridge

host

```
"Aliases": null,
"MacAddress": "",
"NetworkID": "a9ddd20e58a296eb7739da0c571e8bf1ed78beb32306f2230c9eaf16e98
077f5",
"EndpointID": "f0fdd0471f90439e2966d3ed5a5cef0e99c76f792e81d1b81045ffbe39
d8fb17",
"Gateway": "",
"IPAddress": "",
"IPPrefixLen": 0,
"IPv6Gateway": "",
"GlobalIPv6Address": "",
"GlobalIPv6PrefixLen": 0,
"DriverOpts": null,
"DNSNames": null
}
}
}
]
~ → docker inspect alpine-1 |grep network
~ X docker inspect alpine-1 |grep Network
{"NetworkMode": "host",
"NetworkSettings": {
"Networks": {
"NetworkID": "a9ddd20e58a296eb7739da0c571e8bf1ed78beb32306f2230c9eaf16e98
077f5",
~ →
```

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Next →

What is the subnet configured on `bridge` network?

172.12.0.0/24

182.18.0.1/16

192.168.0.1/24

```
~ → docker network inspect bridge
[
{
"Name": "bridge",
"Id": "e2f6a2c7e3857627c74b5b6785e16189f38b336dc5c7d1f5d4eebee8fda36177",
"Created": "2025-07-12T23:06:42.950782476Z",
"Scope": "local",
"Driver": "bridge",
"EnableIPv6": false,
"IPAM": {
"Driver": "default",
"Options": null,
"Config": [
{
"Subnet": "172.12.0.0/24",
"Gateway": "172.12.0.1"
}
]
},
"Internal": false,
"Attachable": false,
"Ingress": false,
"ConfigFrom": {
"Network": ""
},
"ConfigOnly": false,
"Containers": {},
"Options": {
"com.docker.network.bridge.default_bridge": "true",

```

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Run a container named `alpine-2` using the `alpine` image and attach it to the `none` network.

Check

Next →

✓ Name: alpine-2 attached to none network

```
~ → docker run -d --name alpine-2 --network none alpine
9c75a16fc3a41a592ebcb40e3e18a1225d32e47fc3d96f933203664bf98bf432
~ →
```

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Create a new network named `wp-mysql-network` using the `bridge` driver. Allocate subnet `182.18.0.0/24`. Configure Gateway `182.18.0.1`.

Check

Next →

✓ Name: wp-mysql-network
✓ Driver: bridge
✓ subnet: 182.18.0.0/24
✓ Gateway: 182.18.0.1

```
~ → docker network create --driver bridge --subnet 182.18.0.0/24 --gateway 182.18.0.1 wp-mysql-network
unknown flag: --driver
See 'docker network create --help'.

~ X docker network create --driver bridge --subnet 182.18.0.0/24 --gateway 182.18.0.1 wp-mysql-network
unknown shorthand flag: 's' in --subnet
See 'docker network create --help'.

~ X docker network create --driver bridge --subnet 182.18.0.0/24 --gateway 182.18.0.1 wp-mysql-networkclear
unknown flag: --driver
See 'docker network create --help'.

~ X docker network create --driver bridge --subnet 182.18.0.0/24 --gateway 182.18.0.1 wp-mysql-network
50b3aaecd3e31e340984a87bb69ab01570915d396b017fc32b963ef0c925d848
~ →
```

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Deploy a `mysql` database using the `mysql:5.7` image and name it `mysql-db`. Attach it to the newly created network `wp-mysql-network`.

Set the database password to use `db_pass123`. The environment variable to set is `MYSQL_ROOT_PASSWORD`.

Check

Next →

- ✓ Name: mysql-db
- ✓ Image: mysql:5.7
- ✓ Env: MYSQL_ROOT_PASSWORD=db_pass123
- ✓ Network: wp-mysql-network

```
~ → docker run -d \
--name mysql-db \
--network wp-mysql-network \
-e MYSQL_ROOT_PASSWORD=db_pass123 \
mysql:5.7

Unable to find image 'mysql:5.7' locally
5.7: Pulling from library/mysql
28e4dcae4c69: Pull complete
1c56c3d4ce74: Pull complete
e9f03a1c24ce: Pull complete
68c3898c2015: Pull complete
6b95a940e7b6: Pull complete
90986bb8de6e: Pull complete
ae71319cb779: Pull complete
ffc89e9df488: Pull complete
43d05e938198: Pull complete
064b2d298fba: Pull complete
df9a4d85569b: Pull complete
Digest: sha256:4bc6bc963e6d8443453676cae56536f4b8156d78bae03c0145cbe47c2aad73bb
Status: Downloaded newer image for mysql:5.7
c131449618d1874dac225e067c83bbd2b22723d12c95ce20742e37cd6472f1c

~ →
```

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Deploy a web application named `webapp` using the `kodekloud/simple-webapp-mysql` image.

Expose the container's port `8080` to port `38080` on the host.

The application makes use of two environment variable:

- 1: `DB_Host` with the value `mysql-db`.
- 2: `DB_Password` with the value `db_pass123`.

Make sure to attach it to the newly created network called `wp-mysql-network`.

Also make sure to link the `mysql` and the `webapp` container.

Check

Next →

- ✓ Name: webapp

```
~ → docker run -d \
--name webapp \
--network wp-mysql-network \
-p 38080:8080 \
--link mysql-db:mysql-db \
-e DB_Host=mysql-db \
-e DB_Password=db_pass123 \
kodekloud/simple-webapp-mysql
84e19c8f77312203fd93d993c5c204cca6b36ea98d0ac45ef9e8a58baf7baae3

~ →
```

