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Roll no.: R171218020
SAP ID: 500068980

EXPERIMENT1: Playing with Vagrant

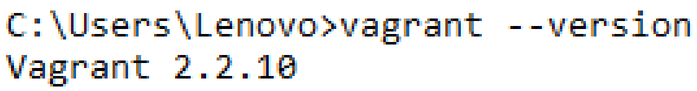
Steps

1. Install Vagrant.

2. Do the normal setup and restart your pc

3. Open command prompt and check version by typing

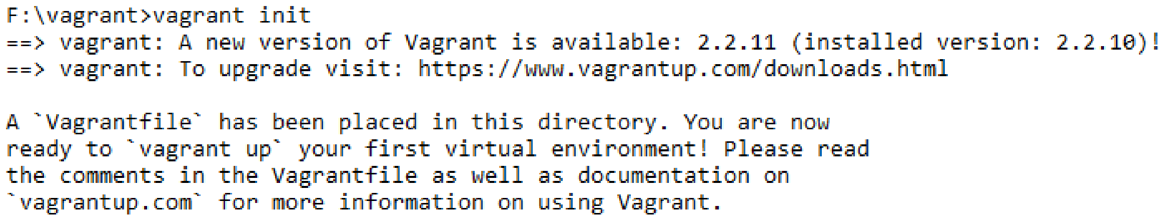
vagrant --version



```
C:\Users\Lenovo>vagrant --version
Vagrant 2.2.10
```

4. Now go to location where you want to store your vagrant file and type

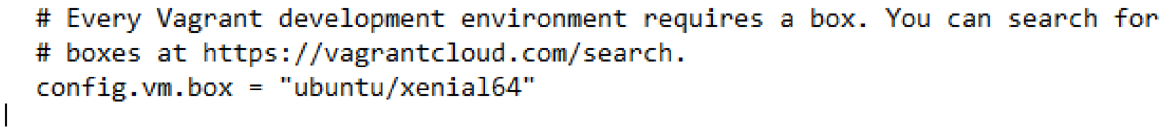
vagrant init



```
F:\vagrant>vagrant init
==> vagrant: A new version of Vagrant is available: 2.2.11 (installed version: 2.2.10)!
==> vagrant: To upgrade visit: https://www.vagrantup.com/downloads.html

A `Vagrantfile` has been placed in this directory. You are now
ready to `vagrant up` your first virtual environment! Please read
the comments in the Vagrantfile as well as documentation on
`vagrantup.com` for more information on using Vagrant.
```

5. Go to that folder Vagrantfile will be created.

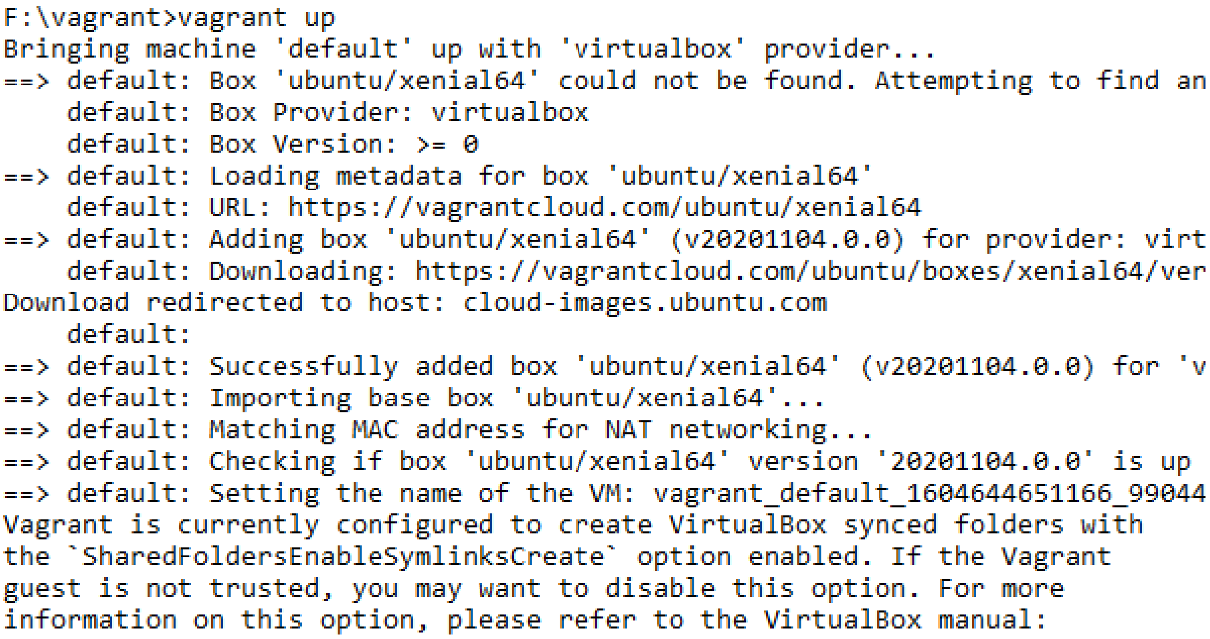
6. Now open that file and change config.vm.box = "base" to config.vm.box = "ubuntu/xenial64"



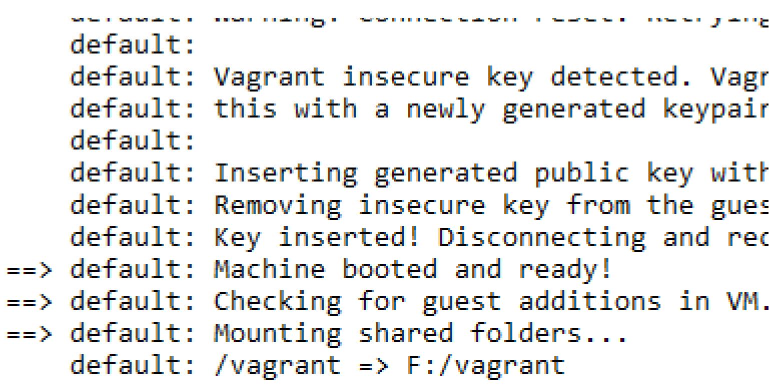
```
  # Every Vagrant development environment requires a box. You can search for
  # boxes at https://vagrantcloud.com/search.
  config.vm.box = "ubuntu/xenial64"
```

7. Now in command prompt type

vagrant up



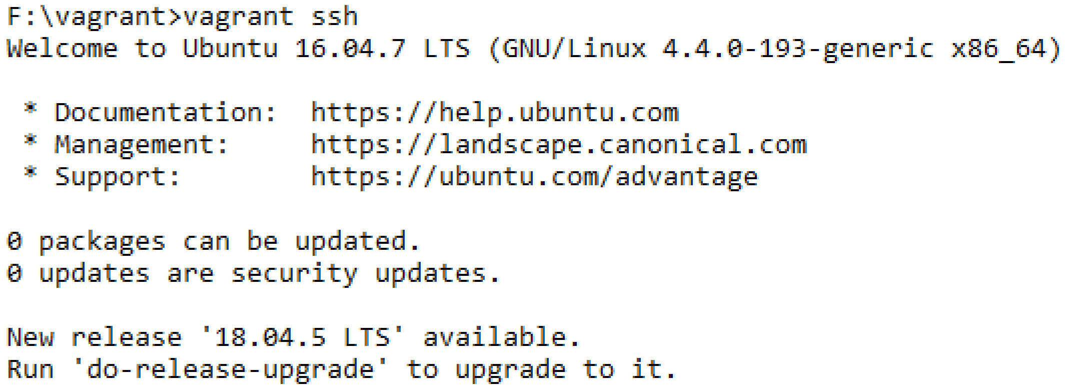
```
F:\vagrant>vagrant up
Bringing machine 'default' up with 'virtualbox' provider...
==> default: Box 'ubuntu/xenial64' could not be found. Attempting to find an
    default: Box Provider: virtualbox
    default: Box Version: >= 0
==> default: Loading metadata for box 'ubuntu/xenial64'
    default: URL: https://vagrantcloud.com/ubuntu/xenial64
==> default: Adding box 'ubuntu/xenial64' (v20201104.0.0) for provider: virt
    default: Downloading: https://vagrantcloud.com/ubuntu/boxes/xenial64/ver
Download redirected to host: cloud-images.ubuntu.com
    default:
==> default: Successfully added box 'ubuntu/xenial64' (v20201104.0.0) for 'v
==> default: Importing base box 'ubuntu/xenial64'...
==> default: Matching MAC address for NAT networking...
==> default: Checking if box 'ubuntu/xenial64' version '20201104.0.0' is up
==> default: Setting the name of the VM: vagrant_default_1604644651166_99044
Vagrant is currently configured to create VirtualBox synced folders with
the `SharedFoldersEnableSymlinksCreate` option enabled. If the Vagrant
guest is not trusted, you may want to disable this option. For more
information on this option, please refer to the VirtualBox manual:
```



```
    default: Warning: Connection reset. Retrying
    default:
    default: Vagrant insecure key detected. Vagr
    default: this with a newly generated keypair
    default:
    default: Inserting generated public key with
    default: Removing insecure key from the gues
    default: Key inserted! Disconnecting and rec
==> default: Machine booted and ready!
==> default: Checking for guest additions in VM.
==> default: Mounting shared folders...
    default: /vagrant => F:/vagrant
```

8. Now type

vagrant ssh



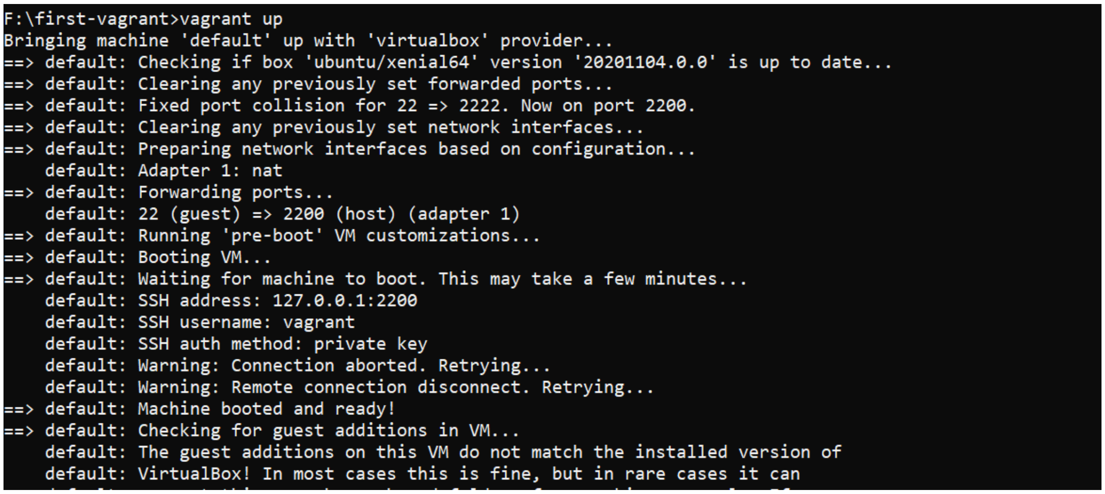
```
F:\vagrant>vagrant ssh
Welcome to Ubuntu 16.04.7 LTS (GNU/Linux 4.4.0-193-generic x86_64)

 * Documentation:  https://help.ubuntu.com
 * Management:     https://landscape.canonical.com
 * Support:        https://ubuntu.com/advantage

0 packages can be updated.
0 updates are security updates.

New release '18.04.5 LTS' available.
Run 'do-release-upgrade' to upgrade to it.
```

This will change your terminal to ubuntu xenial64.

EXPERIMENT 2: Working with VM

Starting VM

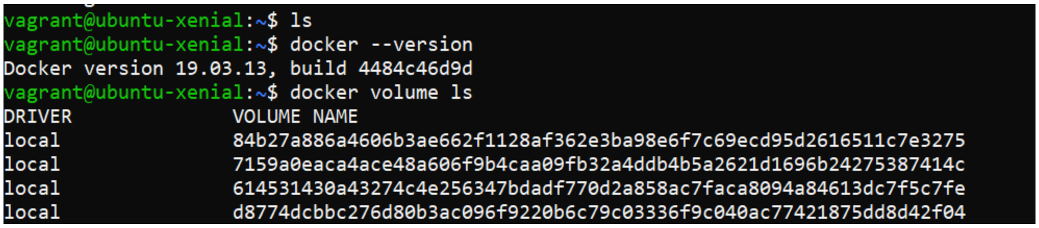
```
$ vagrant up
```



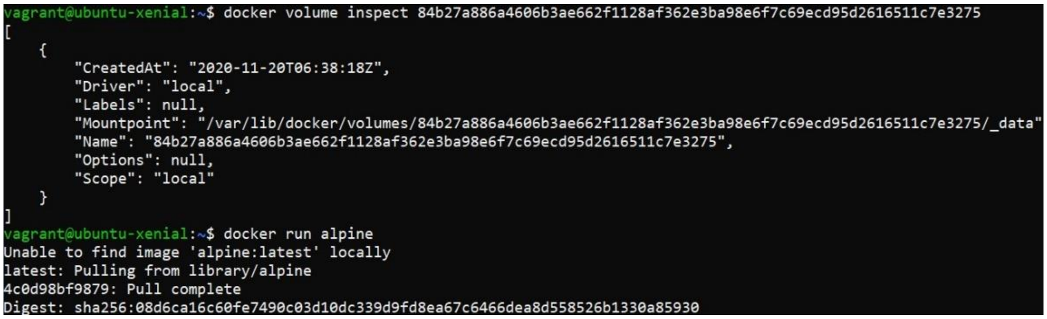
```
F:\first-vagrant>vagrant up
Bringing machine 'default' up with 'virtualbox' provider...
==> default: Checking if box 'ubuntu/xenial64' version '20201104.0.0' is up to date...
==> default: Clearing any previously set forwarded ports...
==> default: Fixed port collision for 22 => 2222. Now on port 2200.
==> default: Clearing any previously set network interfaces...
==> default: Preparing network interfaces based on configuration...
    default: Adapter 1: nat
==> default: Forwarding ports...
    default: 22 (guest) => 2200 (host) (adapter 1)
==> default: Running 'pre-boot' VM customizations...
==> default: Booting VM...
==> default: Waiting for machine to boot. This may take a few minutes...
    default: SSH address: 127.0.0.1:2200
    default: SSH username: vagrant
    default: SSH auth method: private key
    default: Warning: Connection aborted. Retrying...
    default: Warning: Remote connection disconnect. Retrying...
==> default: Machine booted and ready!
==> default: Checking for guest additions in VM...
    default: The guest additions on this VM do not match the installed version of
    default: VirtualBox! In most cases this is fine, but in rare cases it can
```

Listing all the volumes in docker and inspecting a volume

$ docker volume ls



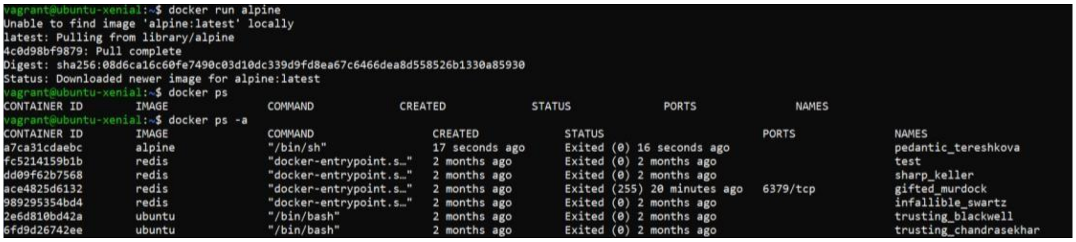
```
vagrant@ubuntu-xenial:~$ ls
vagrant@ubuntu-xenial:~$ docker --version
Docker version 19.03.13, build 4484c46d9d
vagrant@ubuntu-xenial:~$ docker volume ls
DRIVER              VOLUME NAME
local               84b27a886a4606b3ae662f1128af362e3ba98e6f7c69ecd95d2616511c7e3275
local               7159a0eaca4ace48a606f9b4caa09fb32a4ddb4b5a2621d1696b24275387414c
local               614531430a43274c4e256347bdadf770d2a858ac7faca8094a84613dc7f5c7fe
local               d8774dcbbc276d80b3ac096f9220b6c79c03336f9c040ac77421875dd8d42f04
```



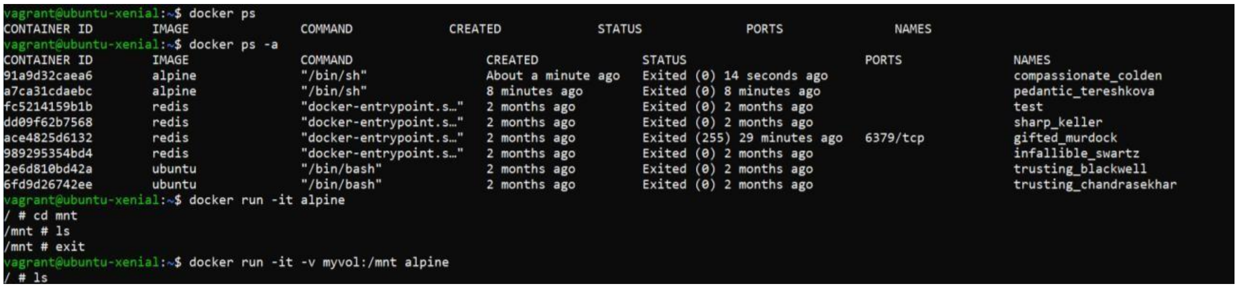
```
vagrant@ubuntu-xenial:~$ docker volume inspect 84b27a886a4606b3ae662f1128af362e3ba98e6f7c69ecd95d2616511c7e3275
[
    {
        "CreatedAt": "2020-11-20T06:38:18Z",
        "Driver": "local",
        "Labels": null,
        "Mountpoint": "/var/lib/docker/volumes/84b27a886a4606b3ae662f1128af362e3ba98e6f7c69ecd95d2616511c7e3275/_data"
        "Name": "84b27a886a4606b3ae662f1128af362e3ba98e6f7c69ecd95d2616511c7e3275",
        "Options": null,
        "Scope": "local"
    }
]
vagrant@ubuntu-xenial:~$ docker run alpine
Unable to find image 'alpine:latest' locally
latest: Pulling from library/alpine
4c0d98bf9879: Pull complete
Digest: sha256:08d6ca16c60fe7490c03d10dc339d9fd8ea67c6466dea8d558526b1330a85930
```

Running an Alpine Image

$ docker run alpine



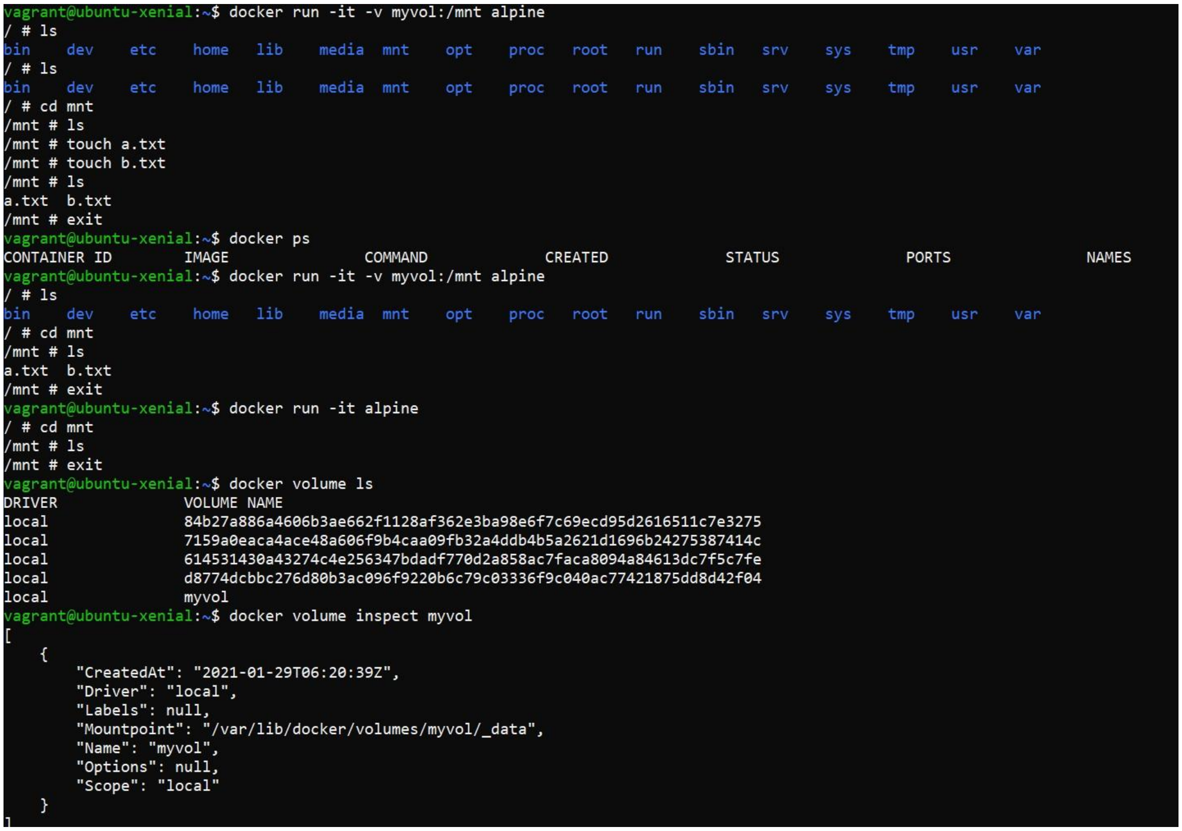
```
vagrant@ubuntu-xenial:~$ docker run alpine
Unable to find image 'alpine:latest' locally
latest: Pulling from library/alpine
4c0d98bf9879: Pull complete
Digest: sha256:08d6ca16c60fe7490c03d10dc339d9fd8ea67c6466dea8d558526b1330a85930
Status: Downloaded newer image for alpine:latest
vagrant@ubuntu-xenial:~$ docker ps
CONTAINER ID        IMAGE               COMMAND             CREATED             STATUS              PORTS               NAMES
vagrant@ubuntu-xenial:~$ docker ps -a
CONTAINER ID        IMAGE               COMMAND                  CREATED             STATUS                        PORTS               NAMES
a7ca31cdaebc        alpine              "/bin/sh"                17 seconds ago      Exited (0) 16 seconds ago                         pedantic_tereshkova
fc5214159b1b        redis               "docker-entrypoint.s…"   2 months ago        Exited (0) 2 months ago                           test
dd09f62b7568        redis               "docker-entrypoint.s…"   2 months ago        Exited (0) 2 months ago                           sharp_keller
ace4825d6132        redis               "docker-entrypoint.s…"   2 months ago        Exited (255) 20 minutes ago   6379/tcp            gifted_murdock
989295354bd4        redis               "docker-entrypoint.s…"   2 months ago        Exited (0) 2 months ago                           infallible_swartz
2e6d810bd42a        ubuntu              "/bin/bash"              2 months ago        Exited (0) 2 months ago                           trusting_blackwell
6fd9d26742ee        ubuntu              "/bin/bash"              2 months ago        Exited (0) 2 months ago                           trusting_chandrasekhar
```



```
vagrant@ubuntu-xenial:~$ docker ps
CONTAINER ID        IMAGE               COMMAND             CREATED             STATUS              PORTS               NAMES
vagrant@ubuntu-xenial:~$ docker ps -a
CONTAINER ID        IMAGE               COMMAND                  CREATED              STATUS                        PORTS               NAMES
91a9d32caea6        alpine              "/bin/sh"                About a minute ago   Exited (0) 14 seconds ago                         compassionate_colden
a7ca31cdaebc        alpine              "/bin/sh"                8 minutes ago        Exited (0) 8 minutes ago                          pedantic_tereshkova
fc5214159b1b        redis               "docker-entrypoint.s…"   2 months ago         Exited (0) 2 months ago                           test
dd09f62b7568        redis               "docker-entrypoint.s…"   2 months ago         Exited (0) 2 months ago                           sharp_keller
ace4825d6132        redis               "docker-entrypoint.s…"   2 months ago         Exited (255) 29 minutes ago   6379/tcp            gifted_murdock
989295354bd4        redis               "docker-entrypoint.s…"   2 months ago         Exited (0) 2 months ago                           infallible_swartz
2e6d810bd42a        ubuntu              "/bin/bash"              2 months ago         Exited (0) 2 months ago                           trusting_blackwell
6fd9d26742ee        ubuntu              "/bin/bash"              2 months ago         Exited (0) 2 months ago                           trusting_chandrasekhar
vagrant@ubuntu-xenial:~$ docker run -it alpine
/ # cd mnt
/mnt # ls
/mnt # exit
vagrant@ubuntu-xenial:~$ docker run -it -v myvol:/mnt alpine
/ # ls
```

Creating some files in that alpine cont.

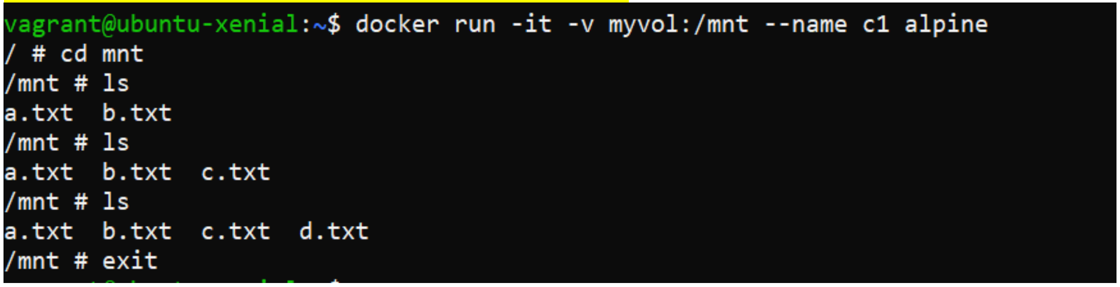
$ docker run –it –v myvol:/mnt alpine



```
vagrant@ubuntu-xenial:~$ docker run -it -v myvol:/mnt alpine
/ # ls
bin    dev    etc    home   lib    media  mnt    opt    proc   root   run    sbin   srv    sys    tmp    usr    var
/ # ls
bin    dev    etc    home   lib    media  mnt    opt    proc   root   run    sbin   srv    sys    tmp    usr    var
/ # cd mnt
/mnt # ls
/mnt # touch a.txt
/mnt # touch b.txt
/mnt # ls
a.txt  b.txt
/mnt # exit
vagrant@ubuntu-xenial:~$ docker ps
CONTAINER ID        IMAGE               COMMAND             CREATED             STATUS              PORTS               NAMES
vagrant@ubuntu-xenial:~$ docker run -it -v myvol:/mnt alpine
/ # ls
bin    dev    etc    home   lib    media  mnt    opt    proc   root   run    sbin   srv    sys    tmp    usr    var
/ # cd mnt
/mnt # ls
a.txt  b.txt
/mnt # exit
vagrant@ubuntu-xenial:~$ docker run -it alpine
/ # cd mnt
/mnt # ls
/mnt # exit
vagrant@ubuntu-xenial:~$ docker volume ls
DRIVER              VOLUME NAME
local               84b27a886a4606b3ae662f1128af362e3ba98e6f7c69ecd95d2616511c7e3275
local               7159a0eaca4ace48a606f9b4caa09fb32a4ddb4b5a2621d1696b24275387414c
local               614531430a43274c4e256347bdadf770d2a858ac7faca8094a84613dc7f5c7fe
local               d8774dcbbc276d80b3ac096f9220b6c79c03336f9c040ac77421875dd8d42f04
local               myvol
vagrant@ubuntu-xenial:~$ docker volume inspect myvol
[
    {
        "CreatedAt": "2021-01-29T06:20:39Z",
        "Driver": "local",
        "Labels": null,
        "Mountpoint": "/var/lib/docker/volumes/myvol/_data",
        "Name": "myvol",
        "Options": null,
        "Scope": "local"
    }
]
```

Creating Container with Volume

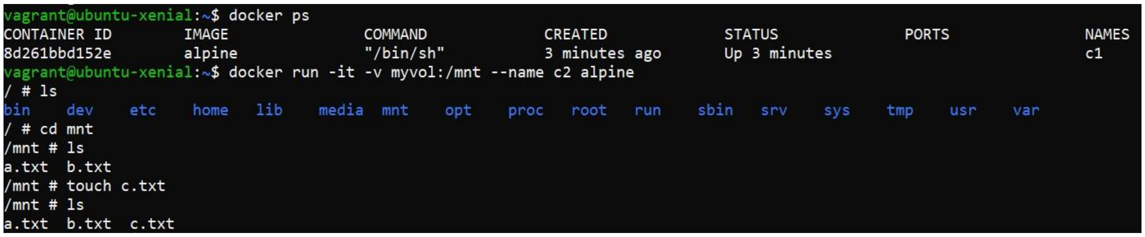
$ docker run –it –v myvol:/mnt –name c1 alpine



```
vagrant@ubuntu-xenial:~$ docker run -it -v myvol:/mnt --name c1 alpine
/ # cd mnt
/mnt # ls
a.txt  b.txt
/mnt # ls
a.txt  b.txt  c.txt
/mnt # ls
a.txt  b.txt  c.txt  d.txt
/mnt # exit
```

In another instance of terminal, starting a VM and running docker in that

$ docker run –it –v myvol:/mnt –name c2 alpine



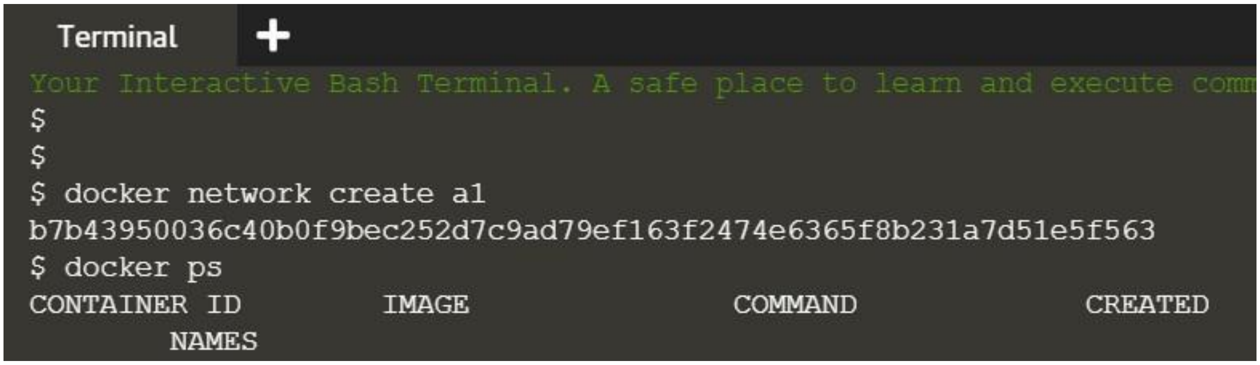
```
vagrant@ubuntu-xenial:~$ docker ps
CONTAINER ID        IMAGE               COMMAND             CREATED             STATUS              PORTS               NAMES
8d261bbd152e        alpine              "/bin/sh"           3 minutes ago       Up 3 minutes                            c1
vagrant@ubuntu-xenial:~$ docker run -it -v myvol:/mnt --name c2 alpine
/ # ls
bin    dev    etc    home   lib    media  mnt    opt    proc   root   run    sbin   srv    sys    tmp    usr    var
/ # cd mnt
/mnt # ls
a.txt  b.txt
/mnt # touch c.txt
/mnt # ls
a.txt  b.txt  c.txt
```

All the files show synced up

EXPERIMENT-3: Container

Check if any container is running

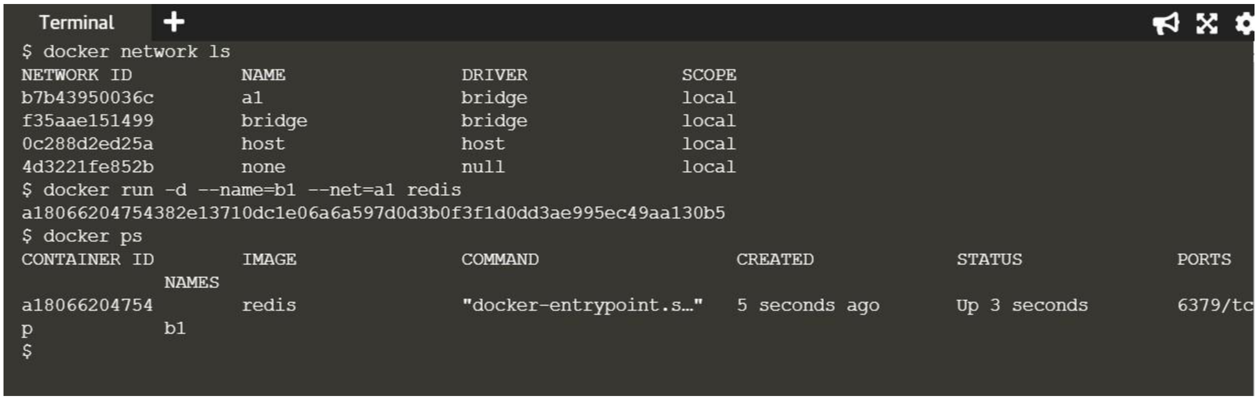
Run command – $ docker ps



```
Your Interactive Bash Terminal. A safe place to learn and execute comm
$
$
$ docker network create a1
b7b43950036c40b0f9bec252d7c9ad79ef163f2474e6365f8b231a7d51e5f563
$ docker ps
CONTAINER ID        IMAGE               COMMAND             CREATED
        NAMES
```

Creating a container

Run command – $ docker run –d –name=b1 –net=a1 redis

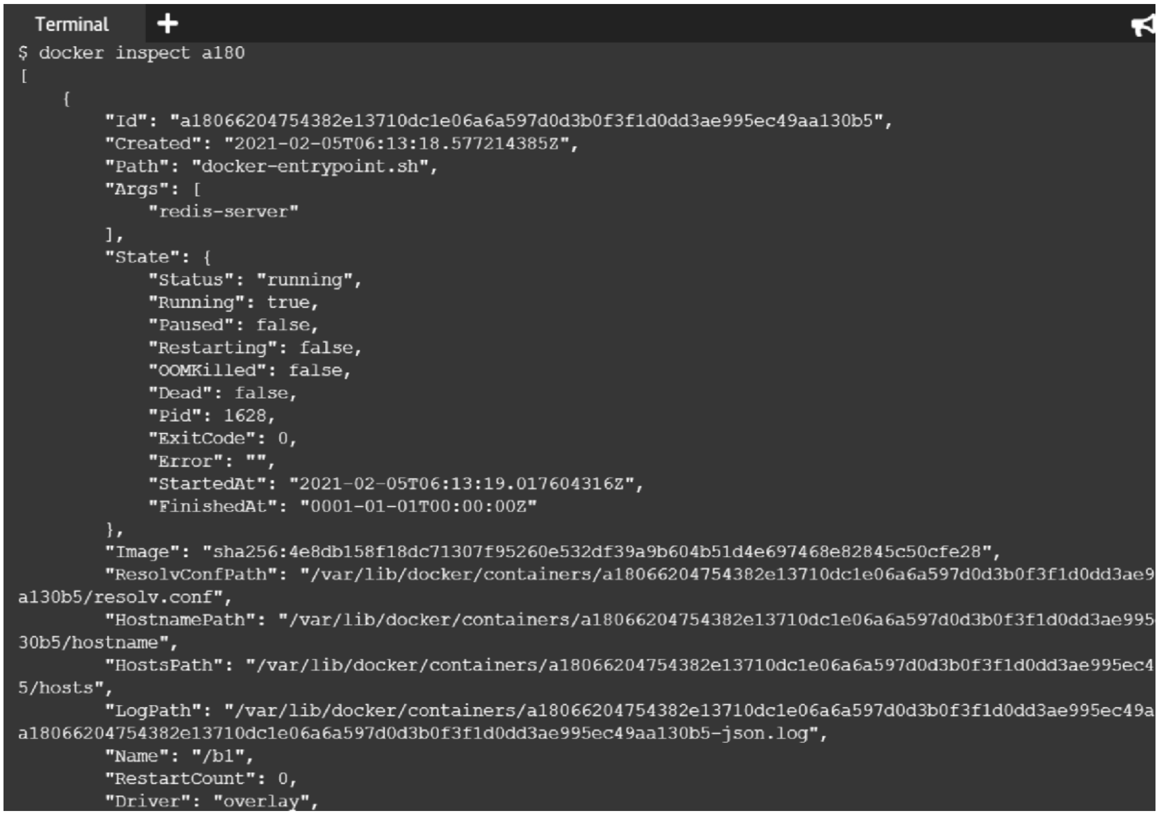


```
$ docker network ls
NETWORK ID          NAME                DRIVER              SCOPE
b7b43950036c        a1                  bridge              local
f35aae151499        bridge              bridge              local
0c288d2ed25a        host                host                local
4d3221fe852b        none                null                local
$ docker run -d --name=b1 --net=a1 redis
a18066204754382e13710dc1e06a6a597d0d3b0f3f1d0dd3ae995ec49aa130b5
$ docker ps
CONTAINER ID        IMAGE               COMMAND                  CREATED             STATUS              PORTS
             NAMES
a18066204754        redis               "docker-entrypoint.s…"   5 seconds ago       Up 3 seconds        6379/tc
p            b1
$
```

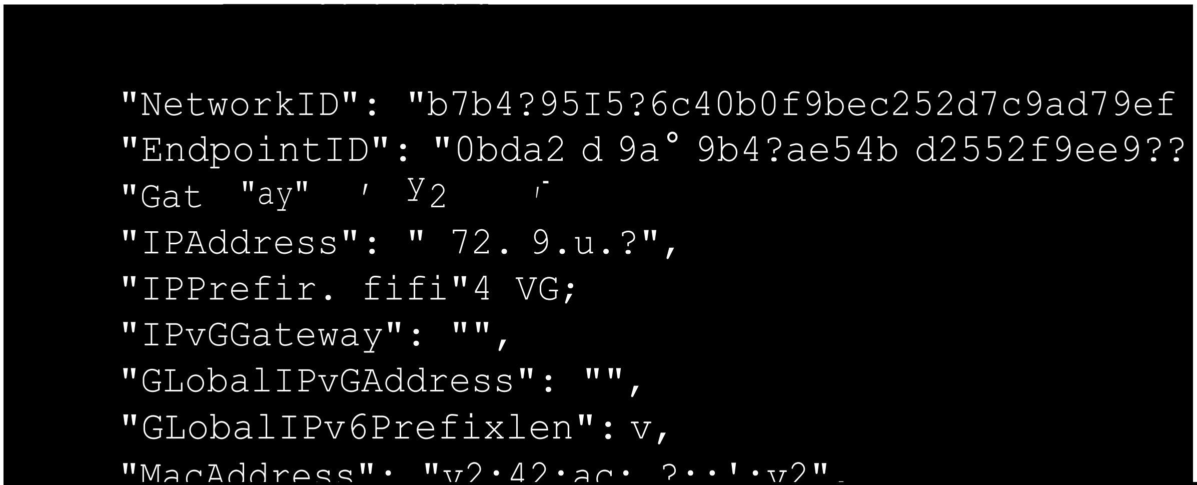
To check IP address

Run command - $ docker inspect a180

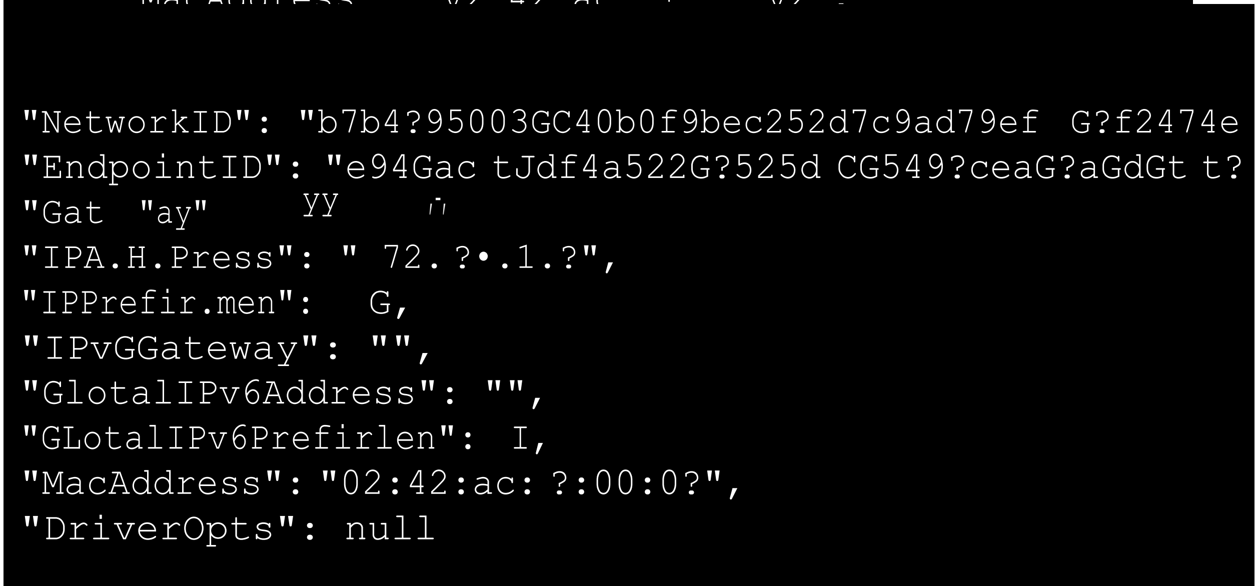
(Note : a180 is unique initials of container ID you want ip)



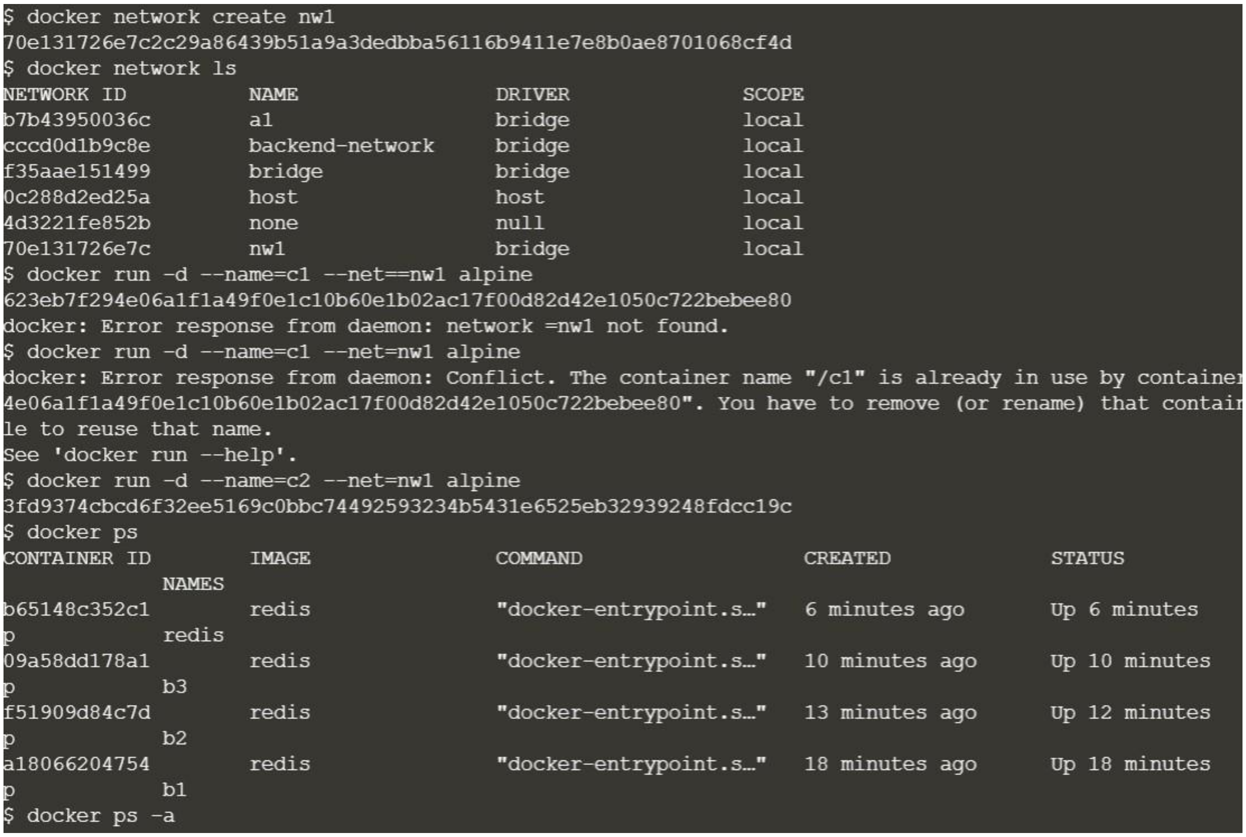
```
$ docker inspect a180
[
    {
        "Id": "a18066204754382e13710dc1e06a6a597d0d3b0f3f1d0dd3ae995ec49aa130b5",
        "Created": "2021-02-05T06:13:18.577214385Z",
        "Path": "docker-entrypoint.sh",
        "Args": [
            "redis-server"
        ],
        "State": {
            "Status": "running",
            "Running": true,
            "Paused": false,
            "Restarting": false,
            "OOMKilled": false,
            "Dead": false,
            "Pid": 1628,
            "ExitCode": 0,
            "Error": "",
            "StartedAt": "2021-02-05T06:13:19.017604316Z",
            "FinishedAt": "0001-01-01T00:00:00Z"
        },
        "Image": "sha256:4e8db158f18dc71307f95260e532df39a9b604b51d4e697468e82845c50cfe28",
        "ResolvConfPath": "/var/lib/docker/containers/a18066204754382e13710dc1e06a6a597d0d3b0f3f1d0dd3ae9
a130b5/resolv.conf",
        "HostnamePath": "/var/lib/docker/containers/a18066204754382e13710dc1e06a6a597d0d3b0f3f1d0dd3ae995
30b5/hostname",
        "HostsPath": "/var/lib/docker/containers/a18066204754382e13710dc1e06a6a597d0d3b0f3f1d0dd3ae995ec4
5/hosts",
        "LogPath": "/var/lib/docker/containers/a18066204754382e13710dc1e06a6a597d0d3b0f3f1d0dd3ae995ec49a
a18066204754382e13710dc1e06a6a597d0d3b0f3f1d0dd3ae995ec49aa130b5-json.log",
        "Name": "/b1",
        "RestartCount": 0,
        "Driver": "overlay",
```



```
    "NetworkID": "b7b4?95I5?6c40b0f9bec252d7c9ad79ef
    "EndpointID": "0bda2 d 9a° 9b4?ae54b d2552f9ee9??
    "Gat  "ay"   ,  y2    ,-
    "IPAddress": " 72. 9.u.?",
    "IPPrefir. fifi"4 VG;
    "IPvGGateway": "",
    "GLobalIPvGAddress": "",
    "GLobalIPv6Prefixlen": v,
    "MacAddress": "v2:42:ac: ?::'.v2",
```



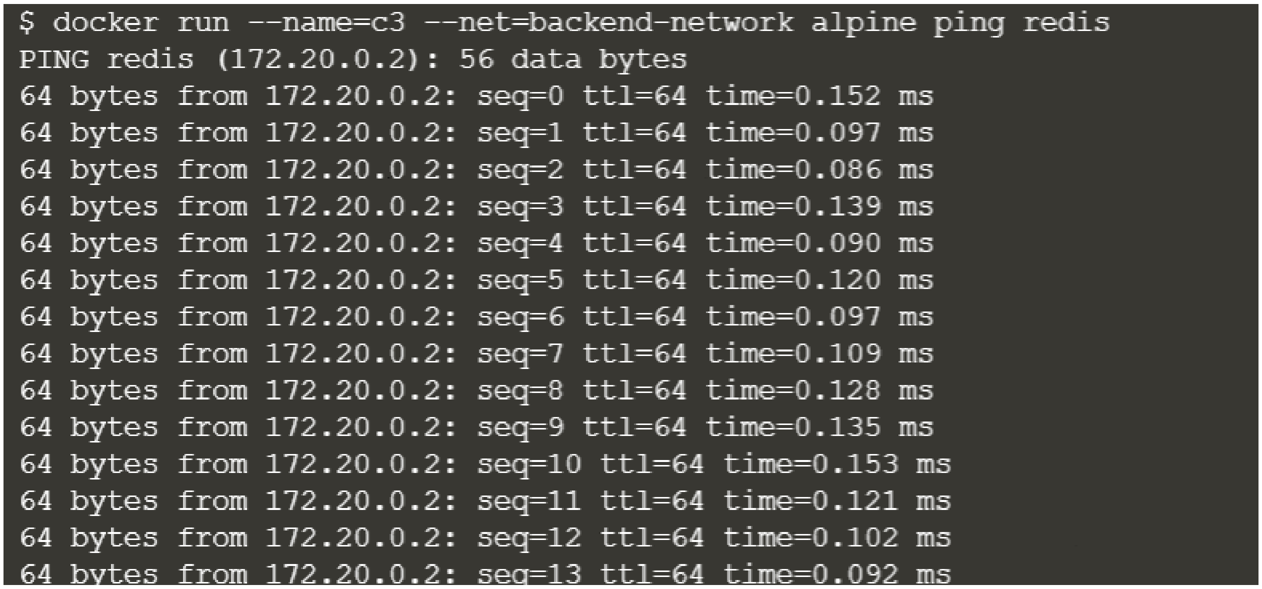
```
"NetworkID": "b7b4?95003GC40b0f9bec252d7c9ad79ef  G?f2474e
"EndpointID": "e94Gac tJdf4a522G?525d CG549?ceaG?aGdGt t?
"Gat  "ay"     yy     ,-
"IPA.H.Press": " 72.?•.1.?",
"IPPrefir.men":   G,
"IPvGGateway": "",
"GlotalIPv6Address": "",
"GLotalIPv6Prefirlen":  I,
"MacAddress": "02:42:ac: ?:00:0?",
"DriverOpts": null
```



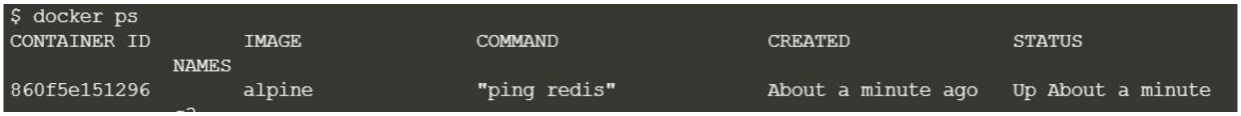
```
$ docker network create nw1
70e131726e7c2c29a86439b51a9a3dedbba56116b9411e7e8b0ae8701068cf4d
$ docker network ls
NETWORK ID          NAME                DRIVER              SCOPE
b7b43950036c        a1                  bridge              local
cccd0d1b9c8e        backend-network     bridge              local
f35aae151499        bridge              bridge              local
0c288d2ed25a        host                host                local
4d3221fe852b        none                null                local
70e131726e7c        nw1                 bridge              local
$ docker run -d --name=c1 --net==nw1 alpine
623eb7f294e06a1f1a49f0e1c10b60e1b02ac17f00d82d42e1050c722bebee80
docker: Error response from daemon: network =nw1 not found.
$ docker run -d --name=c1 --net=nw1 alpine
docker: Error response from daemon: Conflict. The container name "/c1" is already in use by containe
4e06a1f1a49f0e1c10b60e1b02ac17f00d82d42e1050c722bebee80". You have to remove (or rename) that contai
le to reuse that name.
See 'docker run --help'.
$ docker run -d --name=c2 --net=nw1 alpine
3fd9374cbcd6f32ee5169c0bbc74492593234b5431e6525eb32939248fdcc19c
$ docker ps
CONTAINER ID        IMAGE               COMMAND                  CREATED             STATUS
             NAMES
b65148c352c1        redis               "docker-entrypoint.s…"   6 minutes ago       Up 6 minutes
p            redis
09a58dd178a1        redis               "docker-entrypoint.s…"   10 minutes ago      Up 10 minutes
p            b3
f51909d84c7d        redis               "docker-entrypoint.s…"   13 minutes ago      Up 12 minutes
p            b2
a18066204754        redis               "docker-entrypoint.s…"   18 minutes ago      Up 18 minutes
p            b1
$ docker ps -a
```

Ping network

```
$ docker run –name=c3 –net=backend-network alpine ping redis
```



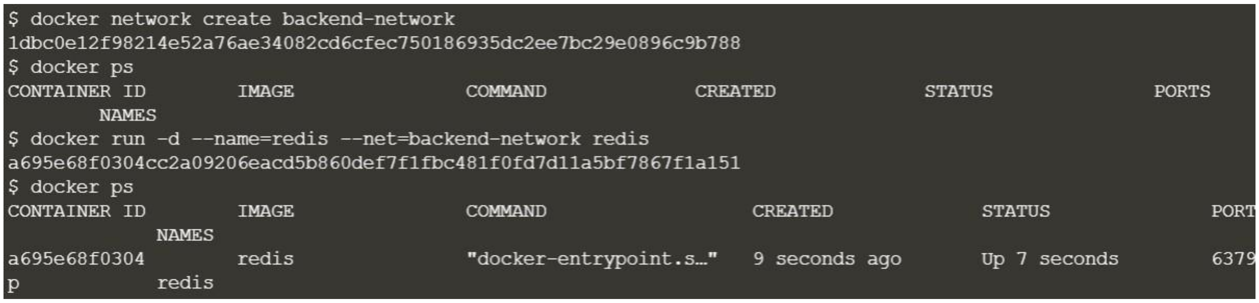
```
$ docker run --name=c3 --net=backend-network alpine ping redis
PING redis (172.20.0.2): 56 data bytes
64 bytes from 172.20.0.2: seq=0 ttl=64 time=0.152 ms
64 bytes from 172.20.0.2: seq=1 ttl=64 time=0.097 ms
64 bytes from 172.20.0.2: seq=2 ttl=64 time=0.086 ms
64 bytes from 172.20.0.2: seq=3 ttl=64 time=0.139 ms
64 bytes from 172.20.0.2: seq=4 ttl=64 time=0.090 ms
64 bytes from 172.20.0.2: seq=5 ttl=64 time=0.120 ms
64 bytes from 172.20.0.2: seq=6 ttl=64 time=0.097 ms
64 bytes from 172.20.0.2: seq=7 ttl=64 time=0.109 ms
64 bytes from 172.20.0.2: seq=8 ttl=64 time=0.128 ms
64 bytes from 172.20.0.2: seq=9 ttl=64 time=0.135 ms
64 bytes from 172.20.0.2: seq=10 ttl=64 time=0.153 ms
64 bytes from 172.20.0.2: seq=11 ttl=64 time=0.121 ms
64 bytes from 172.20.0.2: seq=12 ttl=64 time=0.102 ms
64 bytes from 172.20.0.2: seq=13 ttl=64 time=0.092 ms
```



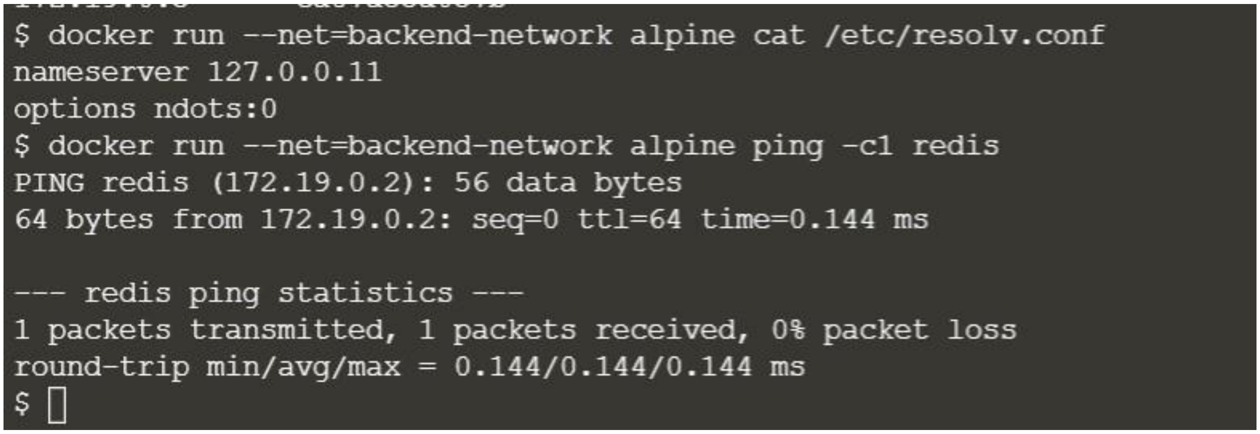
```
$ docker ps
CONTAINER ID        IMAGE               COMMAND                  CREATED             STATUS
             NAMES
860f5e151296        alpine              "ping redis"             About a minute ago   Up About a minute
```

Create a network

`$ docker network create backend-network`



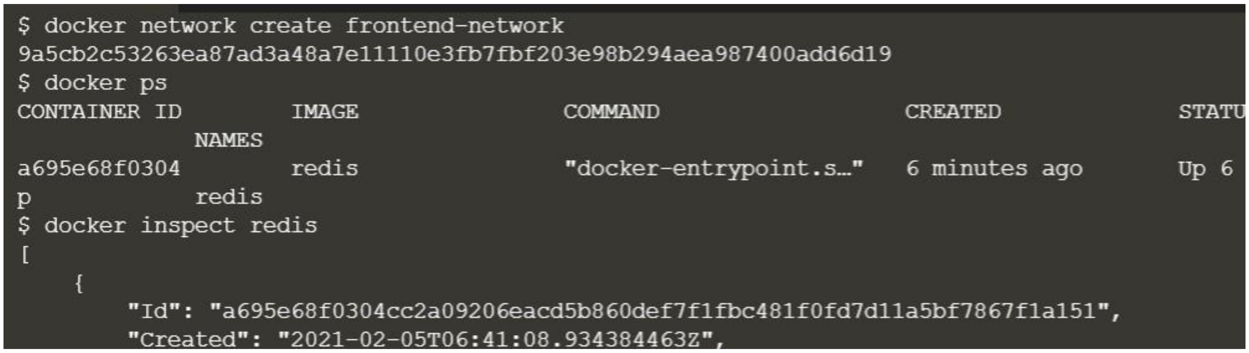
```
$ docker network create backend-network
1dbc0e12f98214e52a76ae34082cd6cfec750186935dc2ee7bc29e0896c9b788
$ docker ps
CONTAINER ID        IMAGE               COMMAND             CREATED             STATUS              PORTS
        NAMES
$ docker run -d --name=redis --net=backend-network redis
a695e68f0304cc2a09206eacd5b860def7f1fbc481f0fd7d11a5bf7867f1a151
$ docker ps
CONTAINER ID        IMAGE               COMMAND                  CREATED             STATUS              PORT
             NAMES
a695e68f0304        redis               "docker-entrypoint.s…"   9 seconds ago       Up 7 seconds        6379
p            redis
```



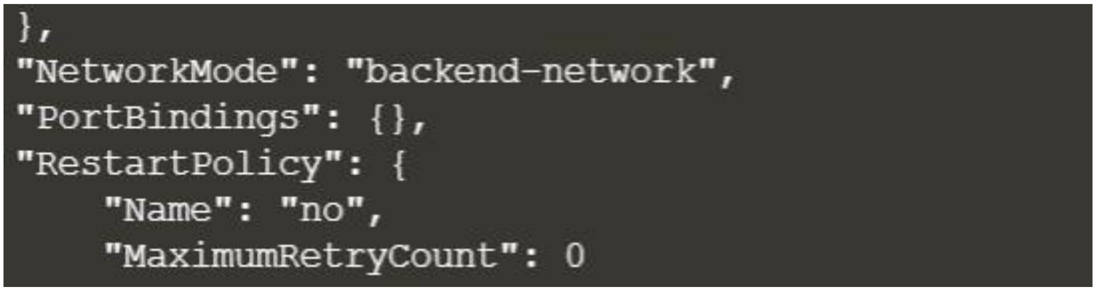
```
$ docker run --net=backend-network alpine cat /etc/resolv.conf
nameserver 127.0.0.11
options ndots:0
$ docker run --net=backend-network alpine ping -c1 redis
PING redis (172.19.0.2): 56 data bytes
64 bytes from 172.19.0.2: seq=0 ttl=64 time=0.144 ms

--- redis ping statistics ---
1 packets transmitted, 1 packets received, 0% packet loss
round-trip min/avg/max = 0.144/0.144/0.144 ms
$ 
```

Create a network

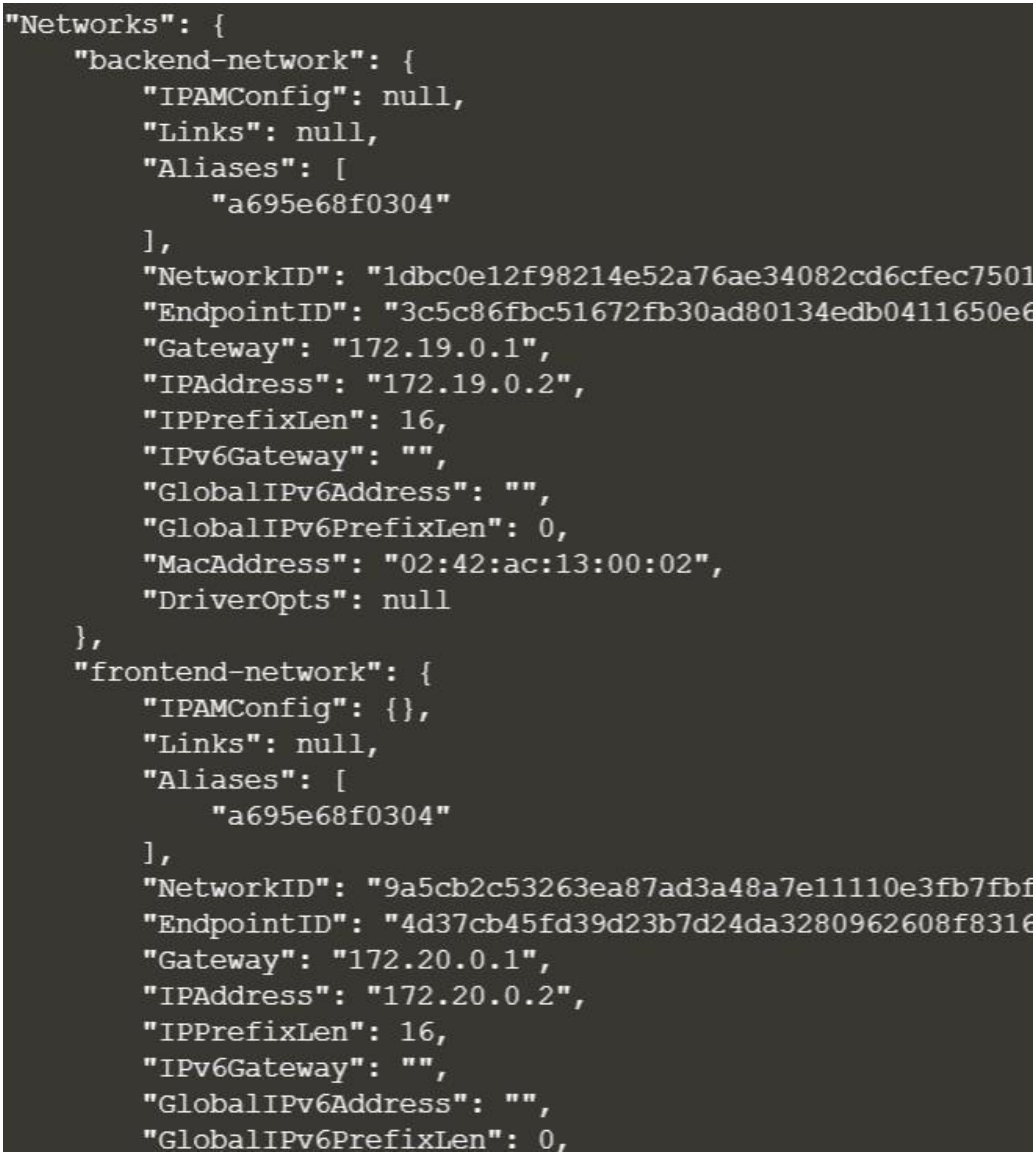
`$ docker network create frontend-network`



```
$ docker network create frontend-network
9a5cb2c53263ea87ad3a48a7e11110e3fb7fbf203e98b294aea987400add6d19
$ docker ps
CONTAINER ID        IMAGE               COMMAND                  CREATED             STATU
             NAMES
a695e68f0304        redis               "docker-entrypoint.s…"   6 minutes ago       Up 6
p            redis
$ docker inspect redis
[
    {
        "Id": "a695e68f0304cc2a09206eacd5b860def7f1fbc481f0fd7d11a5bf7867f1a151",
        "Created": "2021-02-05T06:41:08.934384463Z",
```

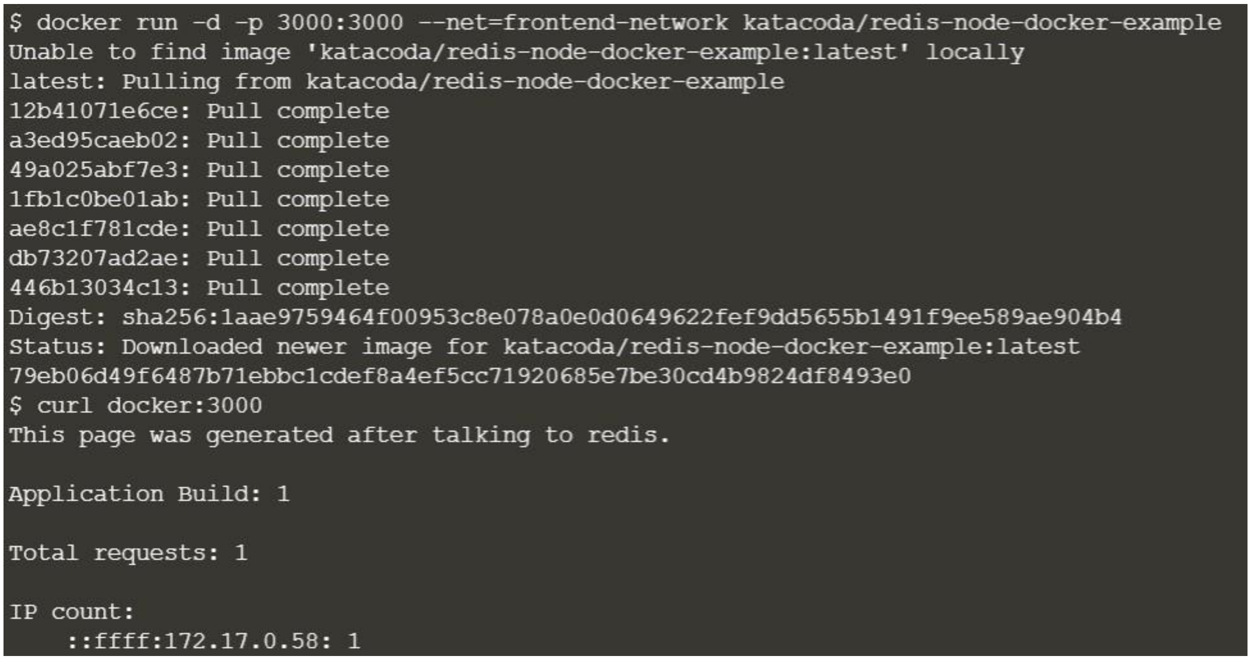


```
},
"NetworkMode": "backend-network",
"PortBindings": {},
"RestartPolicy": {
    "Name": "no",
    "MaximumRetryCount": 0
```



```
"Networks": {
    "backend-network": {
        "IPAMConfig": null,
        "Links": null,
        "Aliases": [
            "a695e68f0304"
        ],
        "NetworkID": "1dbc0e12f98214e52a76ae34082cd6cfec7501
        "EndpointID": "3c5c86fbc51672fb30ad80134edb0411650e6
        "Gateway": "172.19.0.1",
        "IPAddress": "172.19.0.2",
        "IPPrefixLen": 16,
        "IPv6Gateway": "",
        "GlobalIPv6Address": "",
        "GlobalIPv6PrefixLen": 0,
        "MacAddress": "02:42:ac:13:00:02",
        "DriverOpts": null
    },
    "frontend-network": {
        "IPAMConfig": {},
        "Links": null,
        "Aliases": [
            "a695e68f0304"
        ],
        "NetworkID": "9a5cb2c53263ea87ad3a48a7e11110e3fb7fbf
        "EndpointID": "4d37cb45fd39d23b7d24da3280962608f8316
        "Gateway": "172.20.0.1",
        "IPAddress": "172.20.0.2",
        "IPPrefixLen": 16,
        "IPv6Gateway": "",
        "GlobalIPv6Address": "",
        "GlobalIPv6PrefixLen": 0,
```

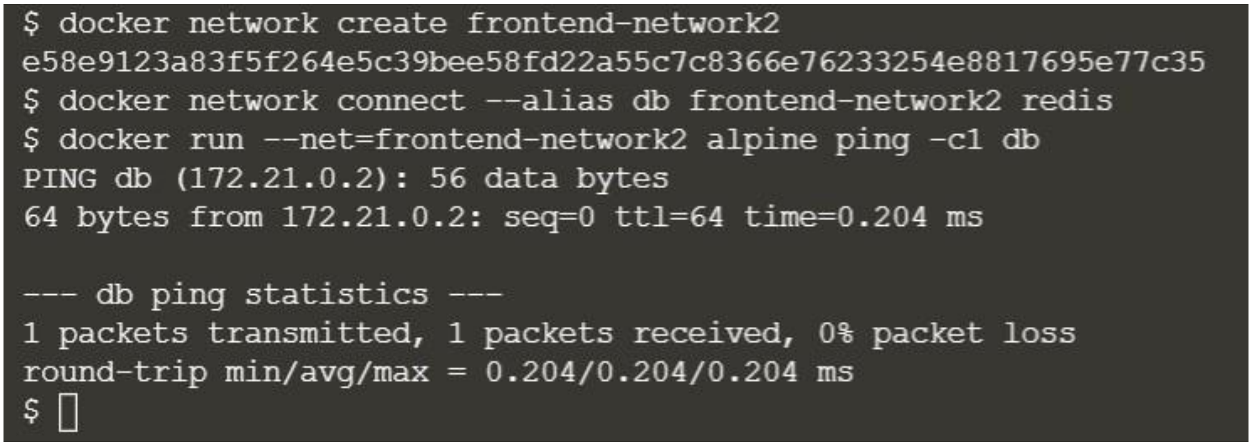
```
$ docker run -d -p 3000:3000 –net=frontend-network katacoda/redis-node- docker-example
```



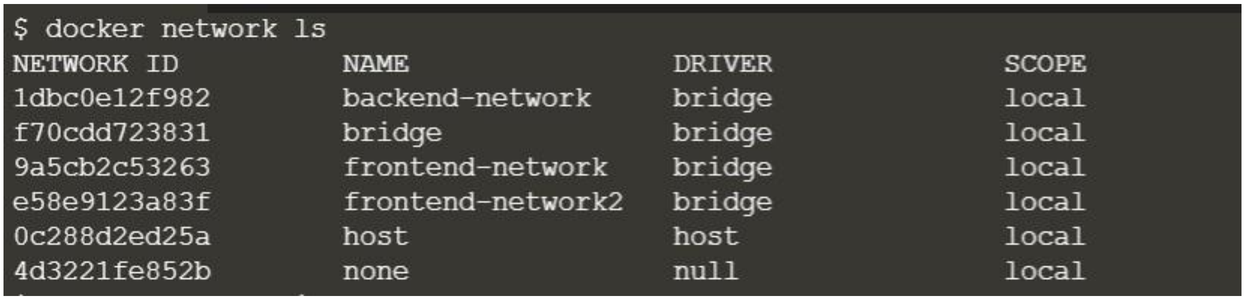
```
$ docker run -d -p 3000:3000 --net=frontend-network katacoda/redis-node-docker-example
Unable to find image 'katacoda/redis-node-docker-example:latest' locally
latest: Pulling from katacoda/redis-node-docker-example
12b41071e6ce: Pull complete
a3ed95caeb02: Pull complete
49a025abf7e3: Pull complete
1fb1c0be01ab: Pull complete
ae8c1f781cde: Pull complete
db73207ad2ae: Pull complete
446b13034c13: Pull complete
Digest: sha256:1aae9759464f00953c8e078a0e0d0649622fef9dd5655b1491f9ee589ae904b4
Status: Downloaded newer image for katacoda/redis-node-docker-example:latest
79eb06d49f6487b71ebbc1cdef8a4ef5cc71920685e7be30cd4b9824df8493e0
$ curl docker:3000
This page was generated after talking to redis.

Application Build: 1

Total requests: 1

IP count:
    ::ffff:172.17.0.58: 1
```

To create a network

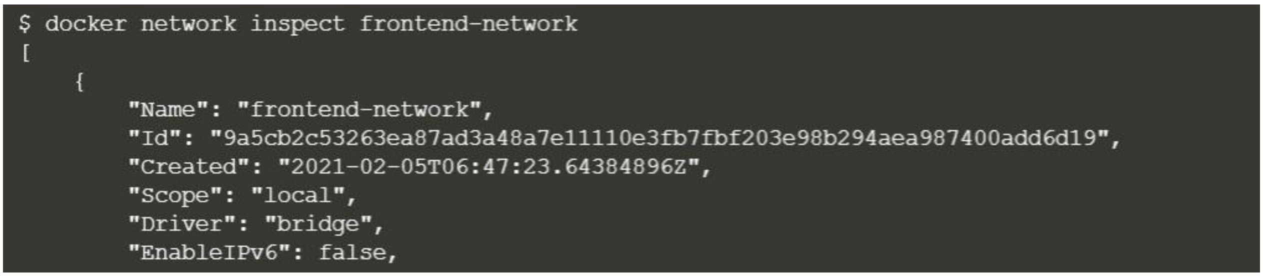
$ docker network create frontend-network



```
$ docker network create frontend-network2
e58e9123a83f5f264e5c39bee58fd22a55c7c8366e76233254e8817695e77c35
$ docker network connect --alias db frontend-network2 redis
$ docker run --net=frontend-network2 alpine ping -c1 db
PING db (172.21.0.2): 56 data bytes
64 bytes from 172.21.0.2: seq=0 ttl=64 time=0.204 ms

--- db ping statistics ---
1 packets transmitted, 1 packets received, 0% packet loss
round-trip min/avg/max = 0.204/0.204/0.204 ms
$ 
```



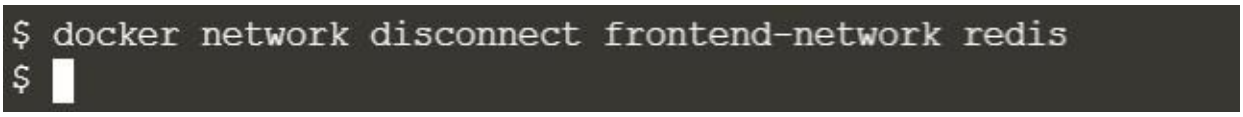
```
$ docker network ls
NETWORK ID          NAME                DRIVER              SCOPE
1dbc0e12f982        backend-network     bridge              local
f70cdd723831        bridge              bridge              local
9a5cb2c53263        frontend-network    bridge              local
e58e9123a83f        frontend-network2   bridge              local
0c288d2ed25a        host                host                local
4d3221fe852b        none                null                local
```



```
$ docker network inspect frontend-network
[
    {
        "Name": "frontend-network",
        "Id": "9a5cb2c53263ea87ad3a48a7e11110e3fb7fbf203e98b294aea987400add6d19",
        "Created": "2021-02-05T06:47:23.64384896Z",
        "Scope": "local",
        "Driver": "bridge",
        "EnableIPv6": false,
```

To disconnect from server

$ docker network disconnect frontend-network redis (frontend-network is name of network)



```
$ docker network disconnect frontend-network redis
$ 
```