Exercise: Exercise: Advanced Container Creation at the Command Line

1 2

1. Using the Docker base image for Ubuntu, create a container with the following characteristics:

- Interactive
- Attached to Terminal
- Using Google Public DNS
- Named 'mycontainer1'

```
[user@linuxacademy docker]$ docker images
REPOSITORY          TAG                 IMAGE ID
   CREATED             VIRTUAL SIZE
docker.io/ubuntu    latest              91e54dfb1179
   5 days ago          188.3 MB
docker.io/centos    6                   a005304e4e74
   9 weeks ago         203.1 MB
[user@linuxacademy docker]$ docker run -it --dns=8.8.8.8
--name="mycontainer1" docker.io/ubuntu:latest /bin/bash
root@6330006f7289:/# cat /etc/resolv.conf
nameserver 8.8.8.8
```

2. Exit the container from Step #1. Using the Docker base image for Ubuntu, create a container with the following characteristics:

- Interactive

- Attached to Terminal
- Using Google Public DNS
- Using Domain Search "mydomain.local"
- Named 'mycontainer2'

```
  [user@linuxacademy docker]$ docker run -it --
dns=8.8.8.8 --dns-search="mydomain.local" --
name="mycontainer2" docker.io/ubuntu:latest /bin/bash

root@2879176e6c81:/# cat /etc/resolv.conf

nameserver 8.8.8.8

search mydomain.local
```

3. Exit the container from Step #2. Using the Docker base image for Ubuntu, create a container with the following characteristics:

- Interactive
- Attached to Terminal
- Using Google Public DNS
- Using Domain Search "mydomain.local"
- Create a mount called '/local_vol'
- Create a mount called '/remote_vol' that mounts the file system in /home/user
- Named 'mycontainer3'

```
[user@linuxacademy docker]$ docker run -it --dns=8.8.8.8
--dns-search="mydomain.local" --name="mycontainer3" -v
/local_vol -v /home/tcox/docker/mydata:/remote_vol
docker.io/ubuntu:latest /bin/bash

root@c5e3e6599556:/# df -h

Filesystem
                                                Size  Used
Avail Use% Mounted on

/dev/mapper/docker-8:2-203558447-
c5e3e65995567b3249f537843d4ff39644925c9265bbd48cd623b6e3564eef
 9.8G  245M  9.0G   3% /

tmpfs
                                                2.0G     0
 2.0G   0% /dev

shm
                                                 64M     0
64M   0% /dev/shm

/dev/sda2
                                                 36G  4.3G
32G  12% /local_vol

tmpfs
                                                2.0G     0
 2.0G   0% /run/secrets

tmpfs
                                                2.0G     0
 2.0G   0% /proc/kcore

tmpfs
                                                2.0G     0
 2.0G   0% /proc/timer_stats

root@c5e3e6599556:/# cat /etc/resolv.conf

nameserver 8.8.8.8

search mydomain.local

root@c5e3e6599556:/# cd /local_vol/
```

```
root@c5e3e6599556:/local_vol# cd /remote_vol/

root@c5e3e6599556:/remote_vol#
```

4. Exit the container from Step #3. List all the containers. List all characteristics inspected from 'mycontainer2' and then remove and verify removal of all containers.

```
[user@linuxacademy docker]$ docker ps -a
CONTAINER ID        IMAGE                     COMMAND
          CREATED             STATUS
PORTS               NAMES
c5e3e6599556        docker.io/ubuntu:latest
"/bin/bash"         2 minutes ago       Exited (0) 3
seconds ago                       mycontainer3
2879176e6c81        docker.io/ubuntu:latest
"/bin/bash"         4 minutes ago       Exited (0) 3
minutes ago                       mycontainer2
6330006f7289        docker.io/ubuntu:latest
"/bin/bash"         7 minutes ago       Exited (0) 5
minutes ago                       mycontainer1
[user@linuxacademy docker]$ docker inspect mycontainer1
(NOTE: SOMETHING SIMILAR FOR EACH CONTAINER - RUN THE
ABOVE COMMAND FOR EACH NAME)
[
{
    "Id":
"6330006f72899510254d23f845c4507d604773d2fcf2bffb77f44da133020
    "Created": "2015-08-25T21:05:43.135824241Z",
    "Path": "/bin/bash",
    "Args": [],
    "State": {
        "Running": false,
        "Paused": false,
        "Restarting": false,
        "OOMKilled": false,
        "Dead": false,
        "Pid": 0,
```

```
        "ExitCode": 0,
        "Error": "",
        "StartedAt": "2015-08-25T21:05:44.409339189Z",
        "FinishedAt": "2015-08-25T21:07:32.103884307Z"
    },
    "Image":
"91e54dfb11794fad694460162bf0cb0a4fa710cfa3f60979c177d920813e2
    "NetworkSettings": {
        "Bridge": "",
        "EndpointID": "",
        "Gateway": "",
        "GlobalIPv6Address": "",
        "GlobalIPv6PrefixLen": 0,
        "HairpinMode": false,
        "IPAddress": "",
        "IPPrefixLen": 0,
        "IPv6Gateway": "",
        "LinkLocalIPv6Address": "",
        "LinkLocalIPv6PrefixLen": 0,
        "MacAddress": "",
        "NetworkID": "",
        "PortMapping": null,
        "Ports": null,
        "SandboxKey": "",
        "SecondaryIPAddresses": null,
        "SecondaryIPv6Addresses": null
    },
```

```
    "ResolvConfPath":
"/var/lib/docker/containers/6330006f72899510254d23f845c4507d60
    "HostnamePath":
"/var/lib/docker/containers/6330006f72899510254d23f845c4507d60
    "HostsPath":
"/var/lib/docker/containers/6330006f72899510254d23f845c4507d60
    "LogPath":
"/var/lib/docker/containers/6330006f72899510254d23f845c4507d60
json.log",
    "Name": "/mycontainer1",
    "RestartCount": 0,
    "Driver": "devicemapper",
    "ExecDriver": "native-0.2",
    "MountLabel": "",
    "ProcessLabel": "",
    "Volumes": {},
    "VolumesRW": {},
    "AppArmorProfile": "",
    "ExecIDs": null,
    "HostConfig": {
        "Binds": null,
        "ContainerIDFile": "",
        "LxcConf": [],
        "Memory": 0,
        "MemorySwap": 0,
        "CpuShares": 0,
        "CpuPeriod": 0,
        "CpusetCpus": "",
        "CpusetMems": "",
```

```
            "CpuQuota": 0,
            "BlkioWeight": 0,
            "OomKillDisable": false,
            "Privileged": false,
            "PortBindings": {},
            "Links": null,
            "PublishAllPorts": false,
            "Dns": [
                "8.8.8.8"
            ],
            "DnsSearch": null,
            "ExtraHosts": null,
            "VolumesFrom": null,
            "Devices": [],
            "NetworkMode": "bridge",
            "IpcMode": "",
            "PidMode": "",
            "UTSMode": "",
            "CapAdd": null,
            "CapDrop": null,
            "RestartPolicy": {
                "Name": "no",
                "MaximumRetryCount": 0
            },
            "SecurityOpt": null,
            "ReadonlyRootfs": false,
            "Ulimits": null,
            "LogConfig": {
```

```
            "Type": "json-file",
            "Config": {}
        },
        "CgroupParent": ""
    },
    "Config": {
        "Hostname": "6330006f7289",
        "Domainname": "",
        "User": "",
        "AttachStdin": true,
        "AttachStdout": true,
        "AttachStderr": true,
        "PortSpecs": null,
        "ExposedPorts": null,
        "Tty": true,
        "OpenStdin": true,
        "StdinOnce": true,
        "Env": null,
        "Cmd": [
            "/bin/bash"
        ],
        "Image": "docker.io/ubuntu:latest",
        "Volumes": null,
        "VolumeDriver": "",
        "WorkingDir": "",
        "Entrypoint": null,
        "NetworkDisabled": false,
        "MacAddress": "",
```

```
        "OnBuild": null,
        "Labels": {},
        "Init": ""
    }
}
]
[user@linuxacademy docker]$ docker rm mycontainer1
mycontainer1
[user@linuxacademy docker]$ docker rm mycontainer2
mycontainer2
[user@linuxacademy docker]$ docker rm mycontainer3
mycontainer3
[user@linuxacademy docker]$ docker ps -a
CONTAINER ID        IMAGE               COMMAND
    CREATED             STATUS              PORTS
      NAMES
```

Back Completed