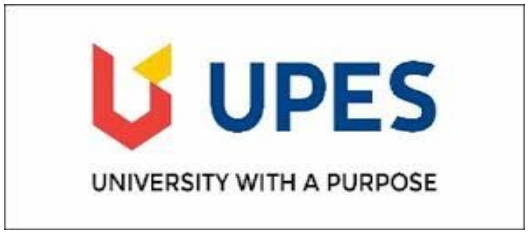

Lab Experiment – 2

Docker Volume

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COURSE – B. Tech CSE- DevOps Batch 1

SUBJECT – Application Containerization

SEMESTER – 6th semester

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Docker Volume

- Check the docker version in your system and listing all the volumes created.

```
[root@localhost /]# docker --version
Docker version 19.03.8, build afacb8b
[root@localhost /]# docker ps
CONTAINER ID        IMAGE               COMMAND             CREATED             STATUS
[root@localhost /]# docker volume ls
DRIVER              VOLUME NAME
local               4a3d636d8295bba0f944ab9656fc1d4cd4fbc37ebc116c6c4273b8d2a49f8886
local               5f5bcbe522aa152e0b0bdf64a0cffad5143648835c27b5899d379291bf25620e
local               40ab6b48a2828f439543fd22397210ffc963779e1438b84053c5023b7c286f52
local               be31691c3e580eba22100ac353c9a2879bb93ef038de66af9821c5a31ff103ec
local               compose-ws_database_storage
local               compose-ws_joomla_storage
```

- Creating a new volume, name “my_vol” using the command “docker volume create my_vol”.

```
[root@localhost /]# docker volume create my_vol
my_vol
[root@localhost /]# docker volume ls
DRIVER              VOLUME NAME
local               4a3d636d8295bba0f944ab9656fc1d4cd4fbc37ebc116c6c4273b8d2a49f8886
local               5f5bcbe522aa152e0b0bdf64a0cffad5143648835c27b5899d379291bf25620e
local               40ab6b48a2828f439543fd22397210ffc963779e1438b84053c5023b7c286f52
local               be31691c3e580eba22100ac353c9a2879bb93ef038de66af9821c5a31ff103ec
local               compose-ws_database_storage
local               compose-ws_joomla_storage
local               my_vol
[root@localhost /]#
```

- Inspecting the volume which is created using the command “docker volume inspect my_vol”.

```
[root@localhost /]# docker volume inspect my_vol
[
    {
        "CreatedAt": "2021-01-29T10:53:39+05:30",
        "Driver": "local",
        "Labels": {},
        "Mountpoint": "/var/lib/docker/volumes/my_vol/_data",
        "Name": "my_vol",
        "Options": {},
        "Scope": "local"
    }
]
```

- Running two containers from the same image. Notice that if we create a file in container 1, here named “acos1”, it is not present in the container 2, here named “acos2”. It is not a good practice since we need to have same files in multiple containers.

```
[root@localhost /]# docker run -it --name acos1 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
/ # ls
bin    dev    etc    home   lib    media  mnt    opt    proc   root   run    sbin   srv    sys    tmp    usr    var
/ # cd mnt
/mnt # touch file1.txt
/mnt # ls
file1.txt
/mnt # exit
[root@localhost /]# docker run -it --name acos2 alpine
/ # ls
bin    dev    etc    home   lib    media  mnt    opt    proc   root   run    sbin   srv    sys    tmp    usr    var
/ # cd mnt
/mnt # ls
/mnt #
/mnt # exit
[root@localhost /]#
```

- Now, we attach the volume created, “my_vol”, to other two containers. Notice that if we create a file in container 1, here named “acos3”, it is present in the container 2, here named “acos4”.

```
[root@localhost /]# docker run -it -v my_vol:/mnt --name acos3 alpine
/ # ls
bin    dev    etc    home   lib    media  mnt    opt    proc   root   run    sbin   srv    sys    tmp    usr    var
/ # cd mnt
/mnt # touch file1.txt
/mnt # ls
file1.txt
/mnt # exit
[root@localhost /]# docker run -it -v my_vol:/mnt --name acos4 alpine
/ # ls
bin    dev    etc    home   lib    media  mnt    opt    proc   root   run    sbin   srv    sys    tmp    usr    var
/ # cd mnt
/mnt # ls
file1.txt
/mnt # exit
[root@localhost /]#
```

- Fetching the terminal of the container using command “docker attach acos3” and adding some content to the file created as shown in previous image, here “file1.txt”.

```
[root@localhost /]# docker attach acos3
/ # ls
bin    dev    etc    home   lib    media  mnt    opt    proc   root   run    sbin   srv    sys    tmp    usr    var
/ # cd mnt
/mnt # ls
file1.txt
/mnt # cat >> file1.txt
My name is Divyaansh Jain
^C
/mnt # cat file1.txt
My name is Divyaansh Jain
/mnt # exit
```

- Notice that the content which we wrote in the file inside container “acos3” is also present in the container “acos4”. This is because same docker volume is attached to both the containers.

```
[root@localhost /]# docker start acos4
acos4
[root@localhost /]# docker attach acos4
/ # cd mnt
/mnt # ls
file1.txt
/mnt # cat file1.txt
My name is Divyaansh Jain
/mnt # exit
```