Navigation

Return to Syllabus (/cp/modules/view/id/33)

Exercise: Exercise: Adding External Content to Containers

1 2

1. Create a directory in your 'user' home directory called 'docker'. Within that directory, create another directory called 'mydata'. Within that directory, create a file called 'mydata.txt' containing any text message you want.

```
[user@linuxacademy ~]$ mkdir docker
[user@linuxacademy ~]$ cd docker
[user@linuxacademy ~]$ mkdir mydata
[user@linuxacademy ~]$ cd mydata
[user@linuxacademy mydata]$ ll
total 0
[user@linuxacademy mydata]$ echo "this is host data" >> mydata.txt
[user@linuxacademy mydata]$ ll
total 4
-rw-rw-r-- 1 user user 18 Aug 25 15:21 mydata.txt
[user@linuxacademy mydata]$ cd ..
[user@linuxacademy docker]$ ll
total 0
drwxrwxr-x 2 user user 23 Aug 25 15:21 mydata
```

2. Create a docker container name 'local_vol' from the 'centos:6' image. The container should be created in interactive mode, attached to the current terminal and running the bash shell. Finally create the container with a volume (or directory) called 'containerdata' so that the system will automatically create the directory/mount when the container starts.

```
[user@linuxacademy docker]$ docker run –it ––
name="local_vol" –v /containerdata centos:6 /bin/bash

[root@191131068f8c /]#
```

3. List the filesystems within the container, specifically looking for the volume/directory that was added to the container during creation.

```
[root@191131068f8c /]# df -h
Filesystem            Size  Used Avail Use% Mounted on
rootfs                9.8G  254M  9.0G   3% /
/dev/mapper/docker-8:2-203558447-
191131068f8ceffe6fb38198a61b9806f27e4d22de3c8b0d2aec4c0c4fe7f8
                      9.8G  254M  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%
/containerdata
tmpfs                 2.0G     0  2.0G   0% /run/secrets
/dev/sda2              36G  4.3G   32G  12%
/etc/resolv.conf
/dev/sda2              36G  4.3G   32G  12%
/etc/hostname
/dev/sda2              36G  4.3G   32G  12% /etc/hosts
tmpfs                 2.0G     0  2.0G   0% /proc/kcore
tmpfs                 2.0G     0  2.0G   0%
/proc/timer_stats
[root@191131068f8c /]# ls -al /containerdata/
total 4
drwxr-xr-x  2 root root    6 Aug 25 20:46 .
drwxr-xr-x 23 root root 4096 Aug 25 20:46 ..

[root@191131068f8c /]#
```

4. Exit the container. This time, create another container called 'remote_vol' with the same container configuration except when creating the volume in the container, link the volume name 'mydata' to the underlying host directory structure created in Step #1.

```
 [user@linuxacademy docker]$ docker run -it --
name="remote_vol" -v /home/user/docker/mydata:/mydata
centos:6 /bin/bash

 [root@0476d5af242f /]#
```

5. Once the container is started, list the disk mounts and verify the remote (host) volume is mounted. Change to that directory and verify that the text file created in Step #1 appears with the content created.

```
[root@0476d5af242f /]# df -h
Filesystem            Size  Used Avail Use% Mounted on
rootfs                9.8G  254M  9.0G   3% /
/dev/mapper/docker-8:2-203558447-
0476d5af242fa74f4e0e65efd02191685570ef89995d57716a2ff09c3078d7
                      9.8G  254M  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% /mydata
tmpfs                 2.0G     0  2.0G   0% /run/secrets
/dev/sda2              36G  4.3G   32G  12%
/etc/resolv.conf
/dev/sda2              36G  4.3G   32G  12%
/etc/hostname
/dev/sda2              36G  4.3G   32G  12% /etc/hosts
tmpfs                 2.0G     0  2.0G   0% /proc/kcore
tmpfs                 2.0G     0  2.0G   0%
/proc/timer_stats
[root@0476d5af242f /]# ls -al /mydata/
total 8
drwxrwxr-x  2 1000 1000   23 Aug 25 20:21 .
drwxr-xr-x 23 root root 4096 Aug 25 20:51 ..
-rw-rw-r--  1 1000 1000   18 Aug 25 20:21 mydata.txt
[root@0476d5af242f /]# cat /mydata/mydata.txt
this is host data
[root@0476d5af242f /]#
```