Module-7: Containerization using Docker Part - II

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DEMO-2: Using Volumes for Storage

Note: All commands are executed as root.

Creating a New Volume

1. Create a new Docker volume using the docker volume command

```
$ docker volume create <volumeName>

$ docker volume ls
```

```
root@docker-1:~# docker volume create vol1
vol1
root@docker-1:~# docker volume ls
DRIVER              VOLUME NAME
local               c583d14f0ff9ea9035cdf1d5a8c9a208e66969660abafaa65ee70c4338e29874
local               vol1
```

2. To check the volume configuration use the inspect option

```
$ docker volume inspect <volumeName>
```

```
root@docker-1:~# docker volume inspect vol1
[
    {
        "CreatedAt": "2020-06-26T07:58:19Z",
        "Driver": "local",
        "Labels": {},
        "Mountpoint": "/var/lib/docker/volumes/vol1/_data",
        "Name": "vol1",
        "Options": {},
        "Scope": "local"
    }
]
```

Starting a container with a volume

1. To start a container with volume using -v flag

```
docker run -d \
--name <containerName> \
-v <volumeName>:<containerPath> \
imageName
```

Mounting a volume using the --mount flag

```
docker run -d \
--name <containerName> \
--mount source=<volumeName>, dst=<containerPath> \
nginx:latest
```

```
root@docker-1:~# docker run -d \
> --name nginx1 \
> -v vol1:/app \
> nginx:latest
925e3e69eab7d5bed256f0d04b4165f94800b95ce4add17d0c08ca26b906e48d
```

2. To verify the volume attached to the container we can run the inspect command and check under mounts section

```
$ docker inspect <containerName>
```

```
"Mounts": [
    {
        "Type": "volume",
        "Name": "vol1",
        "Source": "/var/lib/docker/volumes/vol1/_data",
        "Destination": "/app",
        "Driver": "local",
        "Mode": "z",
        "RW": true,
        "Propagation": ""
    }
],
```