

# Docker volume

---



# Manage data in Docker

Create a container on dockerhost

```
$docker run -d --name vtwebint01 nginx
```



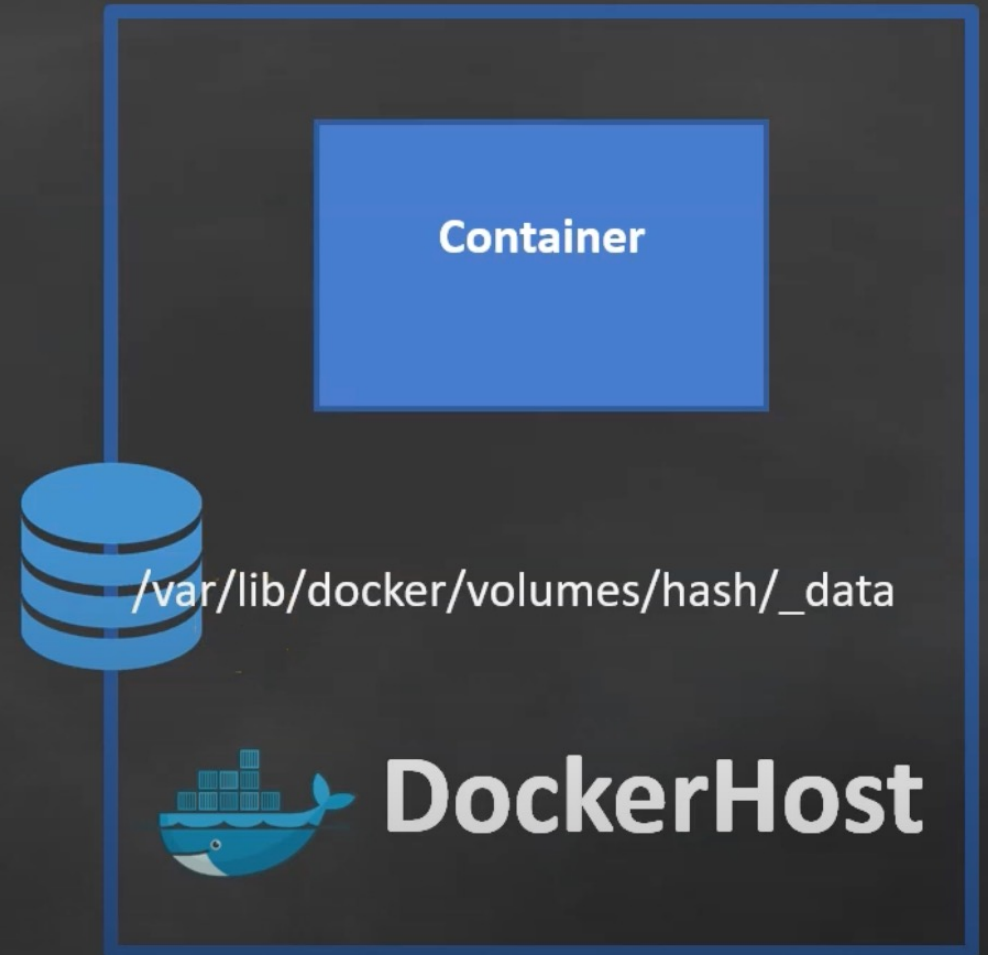
[https://github.com/ravdy/Docker/blob/master/Docker\\_Volumes/docker\\_volumes.md](https://github.com/ravdy/Docker/blob/master/Docker_Volumes/docker_volumes.md)

<https://www.youtube.com/watch?v=RxXZK0V7x7w>

# Manage data in Docker

Create a container on dockerhost

```
$docker run -d --name vtwebint01 nginx
```



# Manage data in Docker

What happen when delete docker

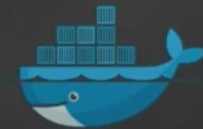
Create a container on dockerhost

```
$docker run -d --name vtwebint01 nginx
```

```
$docker rm -f vtwebint01
```

But I would like to access my data even though container doesn't exist.

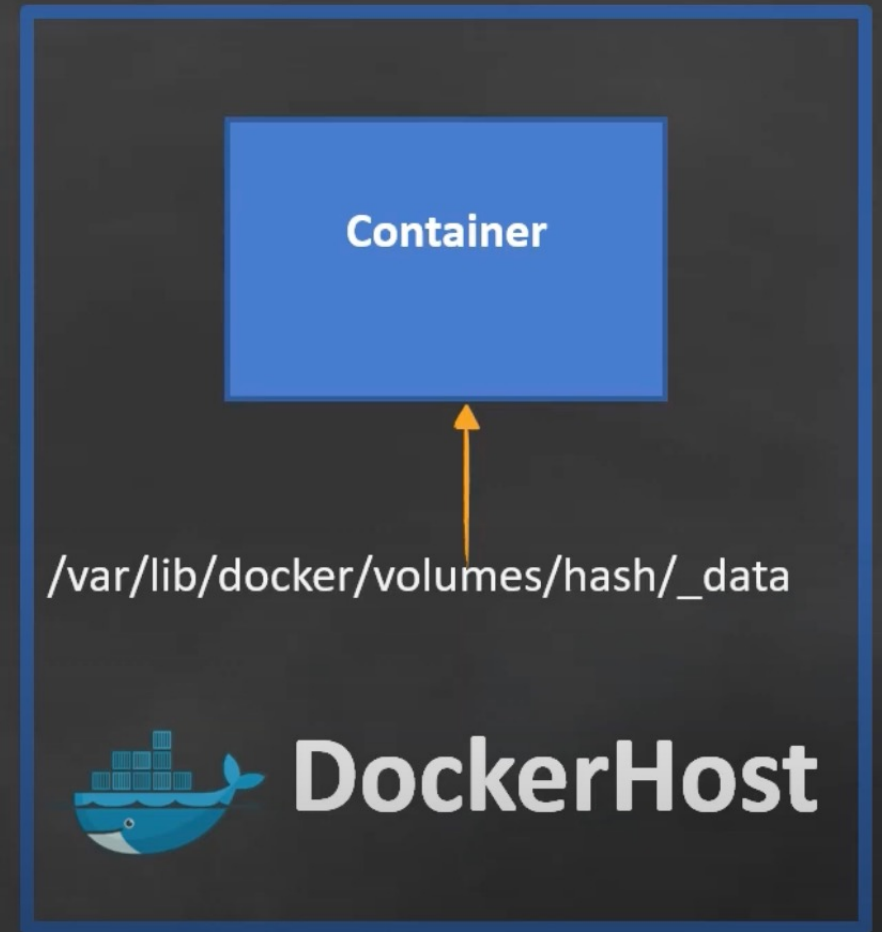
**Solution :** Docker Volumes



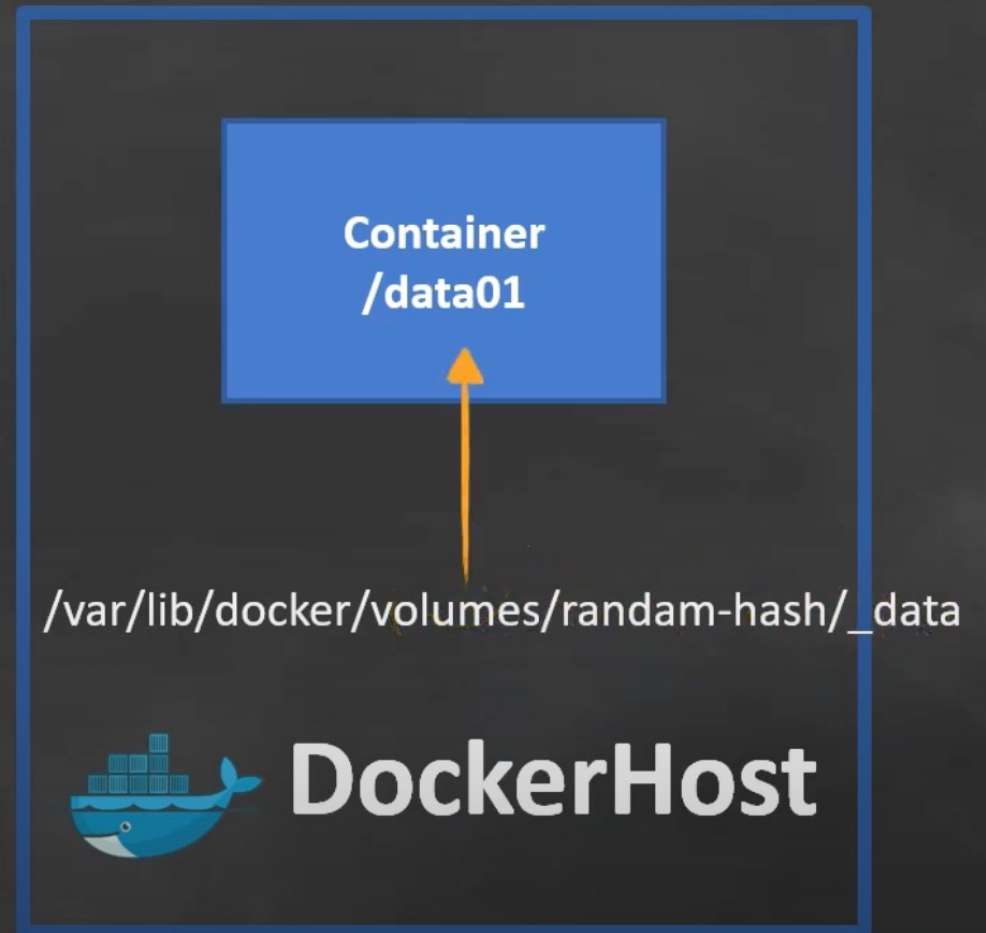
**DockerHost**



1. anonymous volumes
2. Named Volumes
3. host volumes or bind volumes



1. anonymous volumes  
`$docker run`  
`-v /data01`



# Docker Volume types

1. anonymous volumes

```
$docker run  
-v /data01
```

2. Named Volumes

```
$docker run  
-v vtwebuat02_data01_vol:/data01
```

/var/lib/docker/volumes/vtwebuat02\_data01\_vol/\_data



1. anonymous volumes

```
$docker run  
    -v /data01
```

2. Named Volumes

```
$docker run  
    -v vtwebuat02_data01_vol:/data01
```

/var/lib/docker/volumes/vtwebuat02\_data01\_vol/\_data



**DockerHost**

Container  
/data01



1. anonymous volumes

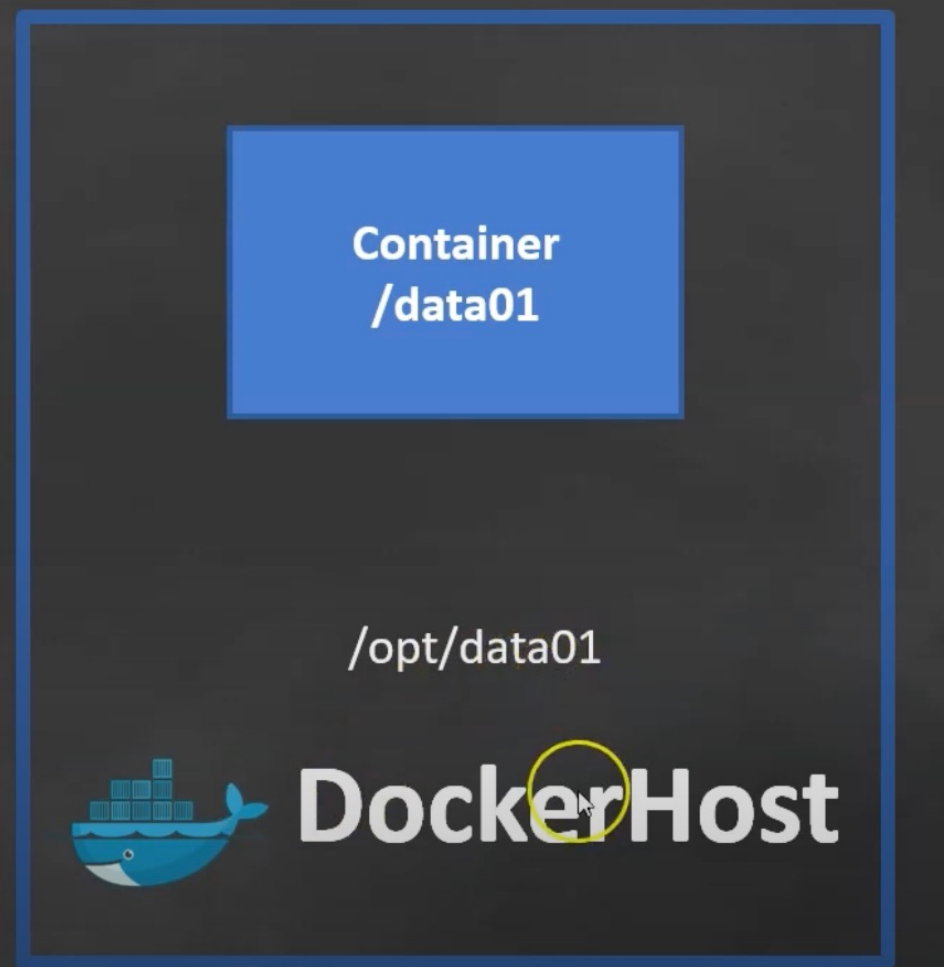
```
$docker run  
-v /data01
```

2. Named Volumes

```
$docker run  
-v vtwebuat02_data01_vol:/data01
```

3. host volumes or bind volumes

```
$docker run  
-v /opt/data01:/data01
```



Lab :

### Anonymous Volumes

Create a container with an anonymous volume which is mounted as `/data01` on container. in this case we mention container directory name. On host system it maps to a random-hash directory under `/var/lib/docker` directory.

```
docker run -it --name vtwebuat01 -v /data01 nginx /bin/bash
```

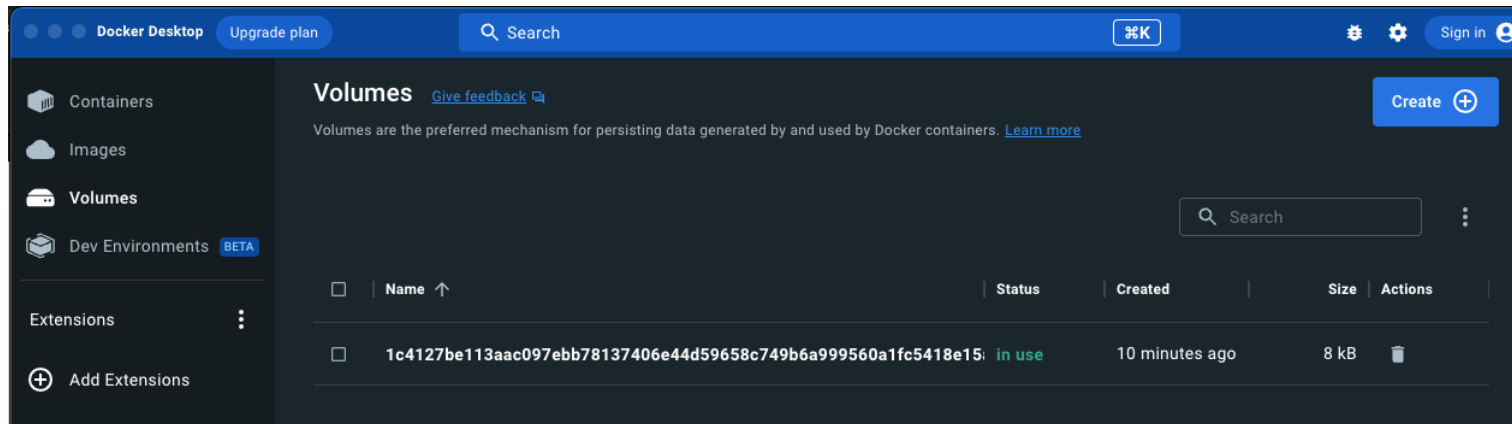
On Host to verify volume

```
docker volume ls  
docker inspect <volume_name>
```

```
(base) tuchsanai@Tuchsanais-MacBook-Pro ~ % docker run -it --name vtwebuat01 -v /data01 nginx /bin/bash
Unable to find image 'nginx:latest' locally
latest: Pulling from library/nginx
934ce60d1040: Pull complete
238b470e100d: Pull complete
fd4ff90344fc: Pull complete
7be7509b8147: Pull complete
fc07d3e6158f: Pull complete
d44fa61c1ffa: Pull complete
Digest: sha256:b8f2383a95879e1ae0664940d9a200f67a6c79e710ed82ac42263397367e7cc4e
Status: Downloaded newer image for nginx:latest
```

```
(base) tuchsanai@Tuchsanais-MacBook-Pro ~ % docker volume ls
DRIVER      VOLUME NAME
local       1c4127be113aac097ebb78137406e44d59658c749b6a999560a1fc5418e15afa
```

```
(base) tuchsanai@Tuchsanais-MacBook-Pro ~ % docker inspect 1c4127be113aac097ebb78137406e44d59658c749b6a999560a1fc5418e15afa
[
  {
    "CreatedAt": "2023-01-27T09:31:55Z",
    "Driver": "local",
    "Labels": null,
    "Mountpoint": "/var/lib/docker/volumes/1c4127be113aac097ebb78137406e44d59658c749b6a999560a1fc5418e15afa/_data",
    "Name": "1c4127be113aac097ebb78137406e44d59658c749b6a999560a1fc5418e15afa",
    "Options": null,
    "Scope": "local"
  }
]
```



## Host Volumes

Create a host volume

```
mkdir /opt/data02  
docker run -it --name vtwebuat03 -v /opt/data02:/data02 nginx /bin/bash
```

## Named Volumes

Create a container with a named volume name which is mounted as `/data01` on container. You can see volume name as `vtwebuat02_data01_val`

```
docker run -it --name vtwebuat02 -v vtwebuat02_data01_val:/data01 nginx /bin/bash
```

Create a named volume then attach volume to a container

```
docker volume create vtuatweb03_data01_vol  
docker run -it --name vtuatweb03 -v vtuatweb02_data01_vol:/data01 nginx /bin/bash
```

Create named volume with size



## Host Volumes

Create a host volume

```
mkdir /opt/data02  
docker run -it --name vtwebuat03 -v /opt/data02:/data02 nginx /bin/bash
```