

# Containers

## Running containers

```
docker run <image>
docker run -d <image>           # run in the background
docker run --name <name> <image> # to give a custom name
docker run -p 3000:3000 <image>  # to publish a port HOST:CONTAINER
```

## Listing containers

```
docker ps           # to list running containers
docker ps -a        # to list all containers
```

## Viewing the logs

```
docker logs <containerID>
docker logs -f <containerID> # to follow the log
docker logs -t <containerID> # to add timestamps
docker logs -n 10 <containerID> # to view the last 10 lines
```

## Executing commands in running containers

```
docker exec <containerID> <cmd>
docker exec -it <containerID> sh # to start a shell
```

## Starting and stopping containers

```
docker stop <containerID>
docker start <containerID>
```

## Removing containers

```
docker container rm <containerID>
docker rm <containerID>
docker rm -f <containerID>           # to force the removal
docker container prune                # to remove stopped containers
```

## Volumes

```
docker volume ls
docker volume create app-data
docker volume inspect app-data
docker run -v app-data:/app/data <image>
```

## Copying files between the host and containers

```
docker cp <containerID>:/app/log.txt .
docker cp secret.txt <containerID>:/app
```

## Sharing source code with containers

```
docker run -v $(pwd):/app <image>
```