

# DOCKER COMMANDS: A CHEAT SHEET



[Docker's purpose](#) is to build and manage compute images and to launch them in a container. So, the most useful commands do and expose this information.

Here's a cheat sheet on the top Docker commands to know and use.



(This is part of our [Docker Guide](#). Use the right-hand menu to navigate.)

## Images and containers

The docker command line interface follows this pattern:

```
docker <COMMAND>
```

```
docker images
```

```
docker container
```

The docker images and container commands grant access to the images and containers. From here, you are permitted to do something with them, hence:

`docker images <COMMAND>`  
`Docker container <COMMAND>`

There are:

- **is** lists the resources.
- **cp** copies files/folders between the container and the local file system.
- **create** creates new container.
- **diff** inspects changes to files or directories in a running container.
- **logs** fetches the logs of a container.
- **pause** pauses all processes within one or more containers.
- **rename** renames a container.
- **run** runs a new command in a container.
- **start** starts one or more stopped containers.
- **stop** stops one or more running containers.
- **stats** displays a livestream of containers resource usage statistics.
- **top** displays the running processes of a container.

## View resources with ls

`docker images ls`  
`docker container ls`

From the **container ls** command, the container id can be accessed (first column).

```
2. rahul@Lethalbrains: ~ (zsh)
> $ docker container run --detach nginx
fc6b0cf9bba77b62576848048c07e143715be922b5a3781008e02893fd9eba16
node-6.10.0

[21:01:44]
> $ docker container ls
node-6.10.0
CONTAINER ID   IMAGE     COMMAND                  CREATED        STATUS        PORTS        NAMES
fc6b0cf9bba7   nginx    "nginx -g 'daemon ...'" 6 seconds ago  Up 5 seconds  80/tcp       blissful_benz

[21:01:49]
> $ docker container run --detach --publish 7777:80 nginx
660ed872630c6d32bcd2c6e6184f57726a9293f1b1d9bf2ba0519d16cb2388a0
node-6.10.0

[21:15:45]
> $ docker container ls
node-6.10.0
CONTAINER ID   IMAGE     COMMAND                  CREATED        STATUS        PORTS        NAMES
660ed872630c   nginx    "nginx -g 'daemon ...'" 2 seconds ago  Up 2 seconds  0.0.0.0:7777->80/tcp  youthful_jones
fc6b0cf9bba7   nginx    "nginx -g 'daemon ...'" 14 minutes ago Up 14 minutes  80/tcp       blissful_benz

[21:15:48]
> $
node-6.10.0
```

## Control timing with start, stop, restart, prune

- **start** starts one or more stopped containers.
- **stop** stops one or more running containers.
- **restart** restarts one or more containers.
- **prune** (the best one!) removes all stopped containers.

`docker container stop <container id>`  
`docker container start <container id>`  
`docker container restart <container id>`

```
docker container prune <container id>
```

## Name a container

```
docker run -d -name myfirstcontainer
```

## View vital information: Inspect, stats, top

```
docker container inspect <container id>
```

```
docker container top <container id>
```

```
docker container stats <container id>
```

- **stats** displays a live stream of container(s) resource usage statistics

| CONTAINER ID | NAME         | CPU % | MEM USAGE / LIMIT   | MEM % | NET I/O     | BLOCK I/O | PIDS |
|--------------|--------------|-------|---------------------|-------|-------------|-----------|------|
| a736f0f5dcdb | label-studio | 0.06% | 61.34MiB / 1.943GiB | 3.08% | 2.43kB / 0B | 0B / 0B   | 1    |

- **top** displays the running processes of a container:

| i ~ home\$ docker container top a736f0f5dcdb |      |      |   |
|--|------|------|---|
| PID  | USER | TIME | COMMAND   |
| 1699   | root | 0:05 | {label-studio} /usr/local/bin/python /usr/local/bin/label-studio start my_project |

- **inspect** displays detailed information on one or more containers. With inspect, a JSON is returned detailing the name and states and more of a container.

```

:~ home$ docker container inspect a736f0f5dcdb
[
  {
    "Id": "a736f0f5dcdbf943d381426dc515a5a767b14bf6f2c2cb476598cf06670eae74",
    "Created": "2020-05-10T22:36:14.6469835Z",
    "Path": "label-studio",
    "Args": [
      "start",
      "my_project"
    ],
    "State": {
      "Status": "running",
      "Running": true,
      "Paused": false,
      "Restarting": false,
      "OOMKilled": false,
      "Dead": false,
      "Pid": 1699,
      "ExitCode": 0,
      "Error": "",
      "StartedAt": "2020-07-17T22:16:13.991687584Z",
      "FinishedAt": "2020-07-17T22:16:12.161403085Z"
    },
    "Image": "sha256:ee47e34c82db06fbd4e65c583721baec99d5c16054c446ee716d790e5cb",
    "ResolvConfPath": "/var/lib/docker/containers/a736f0f5dcdbf943d381426dc515a5",
    "HostnamePath": "/var/lib/docker/containers/a736f0f5dcdbf943d381426dc515a5a7",
    "HostsPath": "/var/lib/docker/containers/a736f0f5dcdbf943d381426dc515a5a767b",
    "LogPath": "/var/lib/docker/containers/a736f0f5dcdbf943d381426dc515a5a767b14",
    "06670eae74-json.log",
    "Name": "/label-studio",
    "RestartCount": 0,
    "Driver": "overlay2",
    "Platform": "linux",
    "MountLabel": "",
  }
]

```

## Additional resources

For more on this topic, there's always the [Docker documentation](#), the [BMC DevOps Blog](#), and these articles:

- [Getting Started with Containers and Microservices for Enterprise Leaders](#)
- [How To Introduce Docker Containers in The Enterprise](#)
- [Docker Management Tips](#)
- [Docker Monitoring: How to Monitor Containers and Microservices](#)
- [Containers Aren't Always the Solution](#)