Docker Commands – Complete List

Docker Commands

This tutorial lists and provides examples for all docker commands.

Quick list of Docker Commands

- docker version – Echoes Client's and Server's Version of Docker
- docker images – List all Docker images
- docker build <image> – Builds an image form a Docker file
- docker save <path> <image> – Saves Docker image to .tar file specified by path
- docker run – Runs a command in a new container.
- docker start – Starts one or more stopped containers
- docker stop <container_id> – Stops container
- docker rmi <image> – Removes Docker image
- docker rm <container_id> – Removes Container
- docker pull – Pulls an image or a repository from a registry
- docker push – Pushes an image or a repository to a registry
- docker export – Exports a container's filesystem as a tar archive
- docker exec – Runs a command in a run-time container
- docker ps – Show running containers
- docker ps -a – Show all containers
- docker ps -l – Show latest created container
- docker search – Searches the Docker Hub for images
- docker attach – Attaches to a running container
- docker commit – Creates a new image from a container's changes

Docker Commands

Following are examples for each of the docker commands

Docker Version

```
$ docker version
```

```
root@arjun-VPCEH26EN:~# docker version
Client:
 Version: 17.05.0-ce
 API version: 1.29
 Go version: go1.7.5
 Git commit: 89658be
 Built: Thu May 4 22:10:54 2017
 OS/Arch: linux/amd64

Server:
 Version: 17.05.0-ce
 API version: 1.29 (minimum version 1.12)
 Go version: go1.7.5
 Git commit: 89658be
 Built: Thu May 4 22:10:54 2017
 OS/Arch: linux/amd64
 Experimental: false
```

Docker Image Commands

List all Docker Images

```
$ docker images
```

```
root@arjun-VPCEH26EN:~# docker images
REPOSITORY          TAG                 IMAGE ID            CREATED             SIZE
python              latest 26acbad26a2c 5 days ago 690MB
java 8 d23bdf5b1b1b 8 months ago 643MB
hello-world         latest              c54a2cc56cbb 14 months ago 1.85kB
```

Create a Docker Image

```
$ docker build -t <application_name> .
```

The directory should contain Dockerfile, from which you are running the command in Terminal.

```
root@arjun-VPCEH26EN:/home/arjun/workspace/docker/java-application# docker build -t java-application .
Sending build context to Docker daemon 3.072kB
Step 1/5 : FROM java:8
 ---> d23bdf5b1b1b
Step 2/5 : COPY . /home/arjun/workspace/docker/java
 ---> 81af33906fe4
Removing intermediate container 7568d6b873a2
Step 3/5 : WORKDIR /home/arjun/workspace/docker/java
 ---> 8da95950d05c
Removing intermediate container 839d56d42bdf
Step 4/5 : RUN javac HelloWorld.java
 ---> Running in 9c9eb847d3e1
 ---> 7b122f467725
Removing intermediate container 9c9eb847d3e1
Step 5/5 : CMD java HelloWorld
 ---> Running in 8fccd7a65ce1
 ---> 0be5de5c6f51
Removing intermediate container 8fccd7a65ce1
Successfully built 0be5de5c6f51
Successfully tagged java-application:latest
root@arjun-VPCEH26EN:/home/arjun/workspace/docker/java-application#
```

Run a Docker image

$ docker run <docker_image_name>

```
root@arjun-VPCEH26EN:~# docker run java-application
HelloWorld from Java Application running in Docker.
```

Save Docker Image to .tar file

$ docker save -o <complete_tar_file_path> <docker_image_name>

```
root@arjun-VPCEH26EN:~# docker save -o /home/arjun/java-application.tar java-application
root@arjun-VPCEH26EN:~# cd /home/arjun/
root@arjun-VPCEH26EN:/home/arjun# ls java-appl*
java-application.tar
```

Remove a Docker image

$ docker rmi <docker_image_id>

When you list the docker images, you get the image id under IMAGE ID column.

```
root@arjun-VPCEH26EN:/home/arjun# docker rmi java-application
Untagged: java-application:latest
Deleted: sha256:0be5de5c6f51ffceb18078c42d6e11d94cf844ac1e06841c9bf993a9718cc325
Deleted: sha256:7b122f46772561d5ccd27c5d5a9524c9de4071f3a22234fb2eaa709d42e874b8
Deleted: sha256:2de3fc280f40633a189f24c154faa7c136ba8afbffb9238b8342f06b8bb5d461
```

Docker Container Commands

Show Running Containers

$ docker ps

```
root@arjun-VPCEH26EN:~# docker ps
CONTAINER ID        IMAGE               COMMAND             CREATED             STATUS              PORTS               NA
```

Show All Containers

$ docker ps -a

```
root@arjun-VPCEH26EN:~# docker ps -a
CONTAINER ID        IMAGE               COMMAND             CREATED             STATUS                      PORTS
743028133ea0 java-application "java HelloWorld" 2 minutes ago       Exited (0) 2 minutes ago                        awesome
3b76a109a28f java-application "java HelloWorld" 5 minutes ago       Exited (0) 5 minutes ago                        nostalg
```

Show Latest Created Container

$ docker ps -l

```
root@arjun-VPCEH26EN:~# docker ps -l
CONTAINER ID        IMAGE               COMMAND             CREATED             STATUS                      PORTS
743028133ea0 java-application "java HelloWorld" 4 minutes ago       Exited (0) 4 minutes ago                        awesome
```

Stop Container

$ docker stop <container_id>

```
root@arjun-VPCEH26EN:/home/arjun# docker stop 743028133ea0
743028133ea0
```

Remove Container

$ docker rm <container_id>

```
root@arjun-VPCEH26EN:/home/arjun# docker rm 743028133ea0
743028133ea0
```

Conclusion :

In this Docker Tutorial – Docker Commands, we have learnt about all docker commands with examples.