

Docker CheatSheet

CLOUD

- PDF Link: [cheatsheet-docker-A4.pdf](#), Category: Cloud
- Blog URL: <https://cheatsheet.dennyzhang.com/cheatsheet-docker-A4>
- Related posts: [Kubernetes Yaml](#), [#denny-cheatsheets](#)

File me Issues or star this repo.

1.1 Docker start service

Name	Summary
Start a ubuntu test env	<code>docker run ubuntu:16.04 /bin/echo hello world</code>
Start a centos test env	<code>docker run centos:centos6 /bin/echo hello world</code>
Start a nginx server	<code>docker run -t -d -p 8080:80 --name nginx-test nginx</code>
Start a jenkins server	<code>docker run -p 8080:8080 denny/jenkins:1.0</code>
Start a nexus server	<code>docker run -d -p 8082:8081 --name nexus -v /data/nexus-data:/nexus-data sonatype/docker-nexus</code>
Start a sshd server	<code>docker run -t -d --privileged -p 5022:22 denny/sshd:latest /usr/sbin/sshd -D</code>
Start a ftp server	<code>docker run -t -d -p 21:21 -p 20:20 -e USERNAME=\${username} -e PASSWORD=\${password} denny/ftp-server</code>

1.2 Docker Containers

Name	Summary
Start docker container	<code>docker run -p 4000:80 <imgname></code>
Start docker container in detached mode	<code>docker run -d -p 4000:80 imgname</code>
Start docker container and remove when exit	<code>docker run -rm -it <imgname> sh</code>
Enter a running container	<code>docker exec -it [container-id] sh</code>
Stop container	<code>docker stop <hash></code>
List all containers	<code>docker ps, docker ps -a</code>
Remove container	<code>docker rm <hash>, docker rm \$(docker ps -a -q)</code>
Force shutdown of one given container	<code>docker kill <hash></code>
Login to docker hub	<code>docker login</code>
Run image from a given tag	<code>docker run username/repo:tag</code>
Tail container logs	<code>docker logs --tail 5 \$container_name</code>
Check container healthcheck status	<code>docker inspect --format '{{.State.Health}}' \$container_name</code>
List containers by labels	<code>docker ps --filter "label=org.label-schema.group"</code>

1.3 Docker Images

Name	Summary
List all images	<code>docker images, docker images -a</code>
Create docker image	<code>docker build -t denny/image:test .</code>
Docker push a tagged image to repo	<code>docker push username/repo:tag</code>
Show the history of an image	<code>docker history <image_name></code>
Export image to file	<code>docker save <image_name> > my_img.tar</code>
Load image to local registry	<code>docker load -i my_img.tar</code>
Tag <image>	<code>docker tag <image> username/repo:tag</code>

1.4 Docker Conf

Name	Summary
Docker files	<code>/var/lib/docker, /var/lib/docker/devicemapper/mnt</code>
Docker for Mac	<code>~/Library/Containers/com.docker.docker/Data/</code>

1.5 Docker Cleanup

Name	Summary
Remove the specified image	<code>docker rmi <imagename></code>
Remove all docker images	<code>docker rmi \$(docker images -q)</code>
Remove orphaned docker volumes	<code>docker volume rm \$(docker volume ls -qf dangling=true)</code>
Remove dead containers	<code>docker rm \$(docker ps --filter status=dead -qa)</code>
Remove exited containers	<code>docker rm \$(docker ps --filter status=exited -qa)</code>
Delete all containers	<code>delete-all-containers.sh</code>
Remove unused docker images	<code>delete-unused-images.sh</code>

1.6 Ubuntu docker: Install missing packages

Name	Summary
Pull ubuntu docker image	<code>docker pull ubuntu</code>
man: command not found	<code>apt-get update, apt-get install man</code>
ping: command not found	<code>apt-get update, apt-get install iputils-ping</code>
dig: command not found	<code>apt-get install dnsutils</code>

1.7 Docker Compose

Name	Summary
Change entrypoint to run nothing	<code>entrypoint: ["tail", "-f", "/dev/null"]</code>
Change restart policy	<code>restart: always, Link: Compose file version 3 reference</code>
Mount file as volume	<code>\$PWD/httpd/httpd.conf:/usr/local/apache2/conf/httpd.conf:ro samples/mount-file.y</code>
Start compose env	<code>docker-compose up, docker-compose up -d</code>
Stop compose env	<code>docker-compose down, docker-compose down -v</code>
Check logs	<code>docker-compose logs</code>

1.8 Check Status

Name	Summary
Tail container logs	<code>docker logs --tail 5 \$container_name</code>
Check container healthcheck status	<code>docker inspect --format '{{.State.Health}}' \$container_name</code>
List containers	<code>docker ps</code>
List all containers	<code>docker ps -a</code>
List containers by labels	<code>docker ps --filter "label=org.label-schema.group"</code>
List all images	<code>docker images -a</code>

1.9 Container Basic

Name	Summary
Start docker container	<code>docker run -p 4000:80 imgname</code>
Start docker container in detached mode	<code>docker run -d -p 4000:80 imgname</code>
Enter a running container	<code>docker exec -it [container-id] sh</code>
Stop container	<code>docker stop <hash></code>
Remove container	<code>docker rm <hash></code>
Remove all containers	<code>docker rm \$(docker ps -a -q)</code>
Force shutdown of one given container	<code>docker kill <hash></code>
Login to docker hub	<code>docker login</code>
Tag <image>	<code>docker tag <image> username/repo:tag</code>
Docker push a tagged image to repo	<code>docker push username/repo:tag</code>
Run image from a given tag	<code>docker run username/repo:tag</code>
Create docker image	<code>docker build -t denny/image:test .</code>

1.10 Docker Socket file

Name	Summary
Run container mounting socket file	<code>docker run -v /var/run/docker.sock:/var/run/docker.sock -it alpine sh</code>
A different docker socket file	<code>export DOCKER_HOST=unix:///my/docker.sock</code>
List containers	<code>curl -XGET --unix-socket /var/run/docker.sock http://localhost/containers/</code>
Stop container	<code>curl -XPOST --unix-socket /var/run/docker.sock http://localhost/containers/</code>
Start container	<code>curl -XPOST --unix-socket /var/run/docker.sock http://localhost/containers/</code>
List events	<code>curl --unix-socket /var/run/docker.sock http://localhost/events</code>
Create container	<code>curl -XPOST --unix-socket /var/run/docker.sock -d '{"Image":"nginx:alpine"}'</code>
Links	Link: Develop with Docker Engine SDKs and API

1.11 Container Runtime

Name	Summary
dockerd	
rkt	a pod-native container engine for Linux.
CRI-O	Open Container Initiative-based implementation of Kubernetes Container Runtime Interface

1.12 Resource Reference

Name	Summary
Docker SDK	https://docs.docker.com/develop/sdk/examples/
Docker REST API	https://docs.docker.com/engine/api/v1.27/#tag/Container
Docker Hub auto build	https://docs.docker.com/docker-hub/builds/#build-statuses-explained

1.13 More Resources

License: Code is licensed under MIT License.