

EXPERIMENT 2

AIM: Working with Docker (Basic Commands)

Steps to Complete:

1. Search a Redis image on DockerHub: **docker search redis**

```
Last login: Wed Aug 10 10:16:02 on ttys002
You have new mail.
anuvagarg@Anuvas-MacBook-Air ~ % docker --version
Docker version 20.10.12, build e91ed57
anuvagarg@Anuvas-MacBook-Air ~ % docker ps
Cannot connect to the Docker daemon at unix:///var/run/docker.sock. Is the docker daemon running?
anuvagarg@Anuvas-MacBook-Air ~ % docker ps
CONTAINER ID   IMAGE      COMMAND                  CREATED        STATUS        PORTS        NAMES
anuvagarg@Anuvas-MacBook-Air ~ % docker pull redis
Using default tag: latest
latest: Pulling from library/redis
1efc276f4ff9: Pull complete
adf5288e41ff: Pull complete
2f387b0b685f: Pull complete
1b3d2bd4ccb8: Pull complete
937c39fc1973: Pull complete
751dcbc45baa: Pull complete
Digest: sha256:9bc34afe08ca30ef179404318cdebe6430ceda35a4ebe4b67d10789b17bdf7c4
Status: Downloaded newer image for redis:latest
docker.io/library/redis:latest
anuvagarg@Anuvas-MacBook-Air ~ % docker search redis
NAME                DESCRIPTION                                     STARS     OFFICIAL   AUTOMATED
redis                Redis is an open source key-value store that... 11211     [OK]
bitnami/redis        Bitnami Redis Docker Image                     227
bitnami/redis-sentinel Bitnami Docker Image for Redis Sentinel         39
bitnami/redis-cluster Bitnami Docker Image for Redis Sentinel         34
rapidfort/redis      RapidFort optimized, hardened image for Redi... 15
rapidfort/redis-cluster RapidFort optimized, hardened image for Redi... 15
circleci/redis       CircleCI images for Redis                       14
ubuntu/redis         Redis, an open source key-value store. Long-... 10
redis/redis-stack    redis-stack installs a Redis server with add... 10
bitnami/redis-exporter redis-stack-server installs a Redis server w... 9
redis/redis-stack-server Redis key-value data structure server with t... 8
clearlinux/redis     Redis key-value data structure server with t... 4
ibmcom/redis-ha      Container image for the IBM Operator for Red... 1
bitnami/redis-sentinel-exporter Container image for the IBM Operator for Red... 1
ibmcom/ibm-cloud-databases-redis-operator Container image for the IBM Operator for Red... 1
vmware/redis-photon  A redis service container image for the Gree... 0
greenbone/redis-server A redis service container image for the Gree... 0
cimg/redis           Redis container for Drupal and CiviCRM          0
rancher/redislabs-ssl Redis container for Drupal and CiviCRM          0
ibmcom/redis-ppc64le redis                                             0
drud/redis           Redis container for Drupal and CiviCRM          0
corpusops/redis      https://github.com/corpusops/docker-images/    0
blackflysolutions/redis Redis container for Drupal and CiviCRM          0
ibmcom/redisearch-ppc64le Redis container for Drupal and CiviCRM          0
rapidfort/redis6-ib  RapidFort optimized, hardened image for Redi... 0
anuvagarg@Anuvas-MacBook-Air ~ % _
```

2. Run Docker Container of Redis Image in background:

docker run -d redis

```
anuvagarg@Anuvas-MacBook-Air ~ % docker run -d redis
62e4ca5bc58cef7d993eba86887aef912220d5ac4de77c6fa7bf3d8b1e52398a
```

3. Run `docker ps` and `docker ps -a`

```
anuvagarg@Anuvas-MacBook-Air ~ % docker ps
CONTAINER ID   IMAGE     COMMAND                  CREATED        STATUS        PORTS        NAMES
62e4ca5bc58c   redis    "docker-entrypoint.s..." About a minute ago Up About a minute 6379/tcp     zen_wilbur

anuvagarg@Anuvas-MacBook-Air ~ % docker ps -a
CONTAINER ID   IMAGE     COMMAND                  CREATED        STATUS        PORTS        NAMES
62e4ca5bc58c   redis    "docker-entrypoint.s..." About a minute ago Up About a minute 6379/tcp     zen_wilbur
197c3248452e   jenkins/jenkins "/usr/bin/tini -- /u..." 5 weeks ago   Exited (255) 8 minutes ago 0.0.0.0:8080->8080/tcp, 0.0.0.0:50000->50000/tcp admiring_ptolemy
04eb0e789488   mongo-express    "tini -- /docker-ent..." 8 weeks ago   Exited (143) 8 weeks ago      mongo-express
d76889f1007a   mongo      "docker-entrypoint.s..." 8 weeks ago   Exited (0) 8 weeks ago      mongod
90be8b8536a4   redis:4.0   "docker-entrypoint.s..." 8 weeks ago   Exited (0) 8 weeks ago      quizzical_knuth
518fc229c1b5   redis:4.0   "docker-entrypoint.s..." 8 weeks ago   Created                                compassionate_buck
db96fdda7fae   db125f93b94 "docker-entrypoint.s..." 8 weeks ago   Exited (0) 8 weeks ago      elated_tereshkova
9b97f0230966   db125f93b94 "docker-entrypoint.s..." 8 weeks ago   Exited (1) 8 weeks ago      competent_chatterjee
2c793b3885ed   redis:4.0   "docker-entrypoint.s..." 8 weeks ago   Exited (1) 8 weeks ago      nervous_kirch
b476c16b013c   db125f93b94 "docker-entrypoint.s..." 8 weeks ago   Exited (0) 8 weeks ago      suspicious_brattain
84b61ecf762d   db125f93b94 "docker-entrypoint.s..." 8 weeks ago   Exited (1) 8 weeks ago      awesome_ritchie
ffdc91629623   postgres:9.6 "docker-entrypoint.s..." 8 weeks ago   Exited (0) 8 weeks ago      postgres-test
3671448bbe18   postgres:9.6 "docker-entrypoint.s..." 8 weeks ago   Created                                postgres
8e44714a18f5   postgres:9.6 "docker-entrypoint.s..." 8 weeks ago   Exited (0) 8 weeks ago      postgres3.1
863649cb1200   postgres:9.6 "docker-entrypoint.s..." 8 weeks ago   Exited (1) 8 weeks ago      postgres3
ed1adb75cc6    postgres:9.6 "docker-entrypoint.s..." 8 weeks ago   Exited (1) 8 weeks ago      heuristic_nightingale
f6e67230859    docker/getting-started "/docker-entrypoint.s..." 5 months ago   Exited (0) 5 months ago      compassionate_moser
```

4. Run Docker Container and take its console

`docker run -it redis /bin/bash`

```
[anuvagarg@Anuvas-MacBook-Air ~ % docker run -it redis /bin/bash
[root@495a9c9e7f63:/data# exit
exit
```

5. Create a Docker Volume and connect it

Before attaching volume to the container:

```
[anuvagarg@Anuvas-MacBook-Air ~ % docker run -it redis /bin/bash
[root@cbebffbf6ded:/data# ls
[root@cbebffbf6ded:/data# mkdir test
[root@cbebffbf6ded:/data# ls
test
[root@cbebffbf6ded:/data# exit
exit
[anuvagarg@Anuvas-MacBook-Air ~ % docker run -it redis /bin/bash
[root@be8085a6df67:/data# ls
[root@be8085a6df67:/data# exit
exit
```

`docker inspect [container_id]`

After attaching volume to the container:

`docker run -d -v mydata:/data redis`

```
anuvagarg@Anuvas-MacBook-Air ~ % docker run -it -v myvol:/data redis /bin/bash
root@867273995c82:/data# ls
root@867273995c82:/data# mkdir test
root@867273995c82:/data# ls
test
root@867273995c82:/data# exit
exit
anuvagarg@Anuvas-MacBook-Air ~ % docker run -it -v myvol:/data redis /bin/bash
root@5d27039e8a54:/data# ls
test
root@5d27039e8a54:/data# exit
exit
```