

EXPERIMENT 2

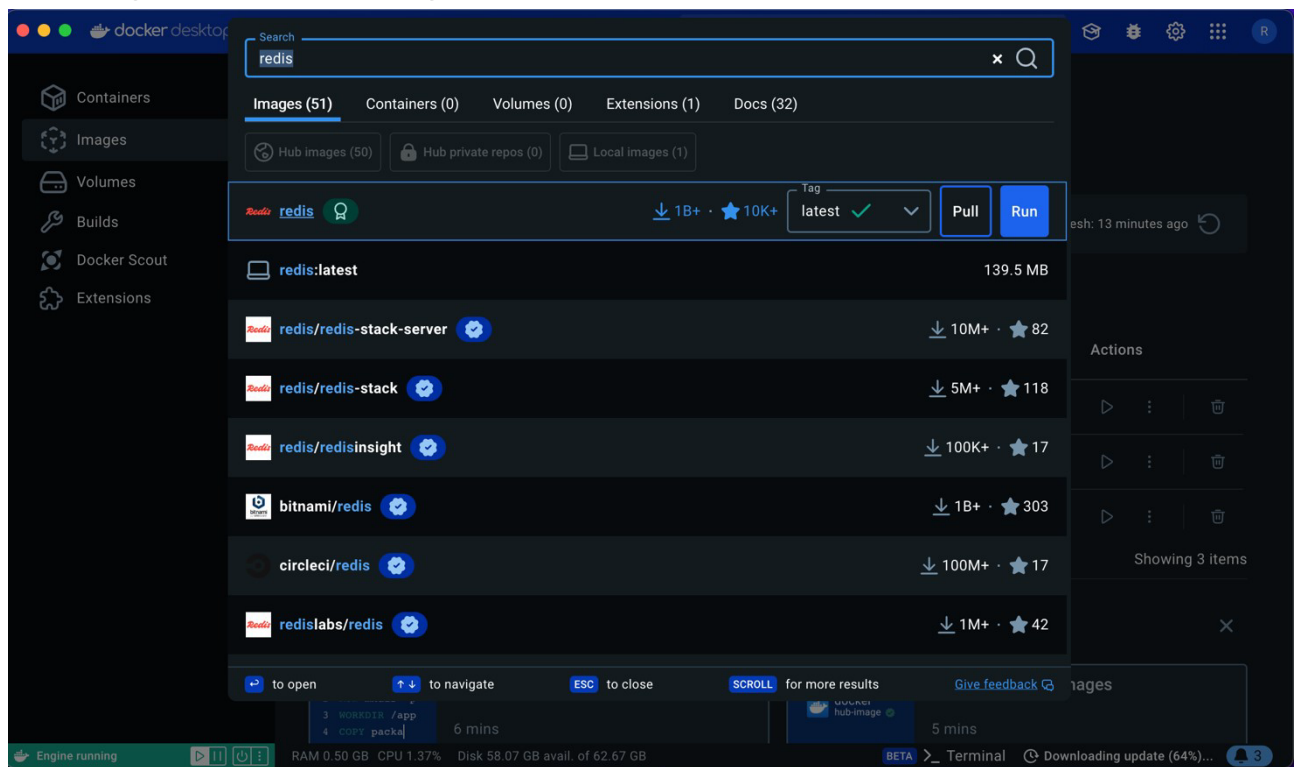
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Aim : Working with Docker – Basic Commands

1. Finding a Redis Image on Docker Hub:



Pulling redis image on local machine to use it offline

~ docker pull redis

this command will pull the redis image from docker hub.

`docker run -d -p 6379:6379 --name redis-container redis`

```
Raghav ~ % docker pull redis
Using default tag: latest
latest: Pulling from library/redis
83d624c4be2d: Pull complete
473c53d52ee8: Pull complete
6f2cf6cf0e56: Pull complete
e5799663249b: Pull complete
8e3fc4377a6e: Pull complete
cedf876e65f7: Pull complete
4f4fb700ef54: Pull complete
3aa9d59b5200: Pull complete
Digest: sha256:a06cea905344470eb49c972f3d030e22f28f632c1b4f43bbe4a26a4329dd6be5
Status: Downloaded newer image for redis:latest
docker.io/library/redis:latest

What's next:
  View a summary of image vulnerabilities and recommendations → docker scout quickview redis
Raghav ~ %
```

We can check what all images are pull from docker hub ~
`docker images` this command helps to see all the images
downloaded on to the local machine.

```
Terminal — -zsh — 80x26
Raghav ~ % docker images
REPOSITORY          TAG          IMAGE ID          CREATED          SIZE
redis                latest       b56cae0d36e0     5 weeks ago     140MB
busybox              latest       63cd0d5fb10d     6 weeks ago     4.04MB
gcr.io/k8s-minikube/kicbase v0.0.45     8411aacd61cb     2 months ago    1.19GB
nginx                latest       195245f0c792     2 months ago    193MB
redis                <none>       9fba7e5fadd5     3 months ago    140MB
ubuntu               latest       ffb64c9b7e8b     5 months ago    101MB
hello-world          latest       ee301c921b8a     18 months ago   9.14kB
Raghav ~ %
```

As redis image has been pulled from the docker hub we can use it.

2. Running the docker container having the redis image:

```
Terminal — docker run redis — 80x26
Raghav ~ % docker run redis
1:C 09 Nov 2024 18:26:19.864 * o000o000o000o Redis is starting o000o000o000o
1:C 09 Nov 2024 18:26:19.864 * Redis version=7.4.1, bits=64, commit=00000000, modified=0, pid=1, just started
1:C 09 Nov 2024 18:26:19.864 # Warning: no config file specified, using the default config. In order to specify a config file use redis-server /path/to/redis.conf
1:M 09 Nov 2024 18:26:19.865 * monotonic clock: POSIX clock_gettime
1:M 09 Nov 2024 18:26:19.865 * Running mode=standalone, port=6379.
1:M 09 Nov 2024 18:26:19.865 * Server initialized
1:M 09 Nov 2024 18:26:19.865 * Ready to accept connections tcp
█
```

To run redis we will use the command
~docker run redis this
will create a container.

```
Terminal — -zsh — 80x24
[Raghav ~ % docker ps
CONTAINER ID   IMAGE          COMMAND                  CREATED          STATUS
PORTS         NAMES
56824fdef902   redis         "docker-entrypoint.s..." 41 seconds ago   Up 40 seconds
6379/tcp      ecstatic_mclean
[Raghav ~ % docker exec -it redis-container redis-cli

What's next:
  Try Docker Debug for seamless, persistent debugging tools in any container or image → docker debug redis-container
  Learn more at https://docs.docker.com/go/debug-cli/
Error response from daemon: container c54ad8ad9465e7ca84095b26b40a635da604fc4e08727ca7da61bfcd1a3e6f55 is not running
Raghav ~ %
```

This shows that the redis container is working fine.

3. Docker ps and Docker ps -a

These commands show the list of docker containers on our local machine

On running ~docker ps and ~docker ps -a the output is :

```
Terminal — -zsh — 80x24
Raghav ~ % docker ps
CONTAINER ID   IMAGE      COMMAND                  CREATED        STATUS
PORTS         NAMES
56824fdef902   redis     "docker-entrypoint.s..." 2 minutes ago  Up 2 minutes
6379/tcp      ecstatic_mclean
Raghav ~ % docker ps -a
CONTAINER ID   IMAGE      COMMAND                  CREATED        STATUS      PORTS
56824fdef902   redis     "docker-entrypoint.s..." 3 minutes ago  Up 3 minutes  6379/tcp
ecstatic_mclean
a21c90e09138   gcr.io/k8s-minikube/kicbase:v0.0.45  "/usr/local/bin/entr..." 2 weeks ago   Exited (255) 6 minutes ago  127.0.0.1:55000->22/tcp, 127.0.0.1:55001->2376/tcp, 127.0.0.1:55002->5000/tcp, 127.0.0.1:55003->8443/tcp, 127.0.0.1:55004->32443/tcp
41491f9c3817   9fba7e5fadd5  "docker-entrypoint.s..." 6 weeks ago   Exited (255) 6 weeks ago    6379/tcp
redisrajatkamboj
9338ae732851   9fba7e5fadd5  "docker-entrypoint.s..." 6 weeks ago   Exited (255) 6 weeks ago    6379/tcp
```

~docker ps just shows the current running containers on the local machine whereas

~docker ps -a shows the list of all running and stopped containers on the local machine

4. Creating Docker volume ~docker volume create volumeBhavesh this creates a new volume

```
Terminal — -zsh — 80x24
Raghav ~ % docker volume create volumeraghav
volumeraghav
Raghav ~ % docker volume ls
DRIVER      VOLUME NAME
local       bd6bbb67dde96d9e4ef716d0bee6f8547586b8d2d857f9f3bc91736eab4cc4227
local       d3c4084a4663ffb7deb375c8c654fb831a47e554a3539a715658c96dc80f6a9c
local       f6ff3f306c1c9a17758248235e7ede919bdb025aec074c99ba8d6c4d7fd7d60e
local       minikube
local       volumeraghav
local       volumerajat
Raghav ~ %
```

Running the redis container with the new volume:

~docker run -d --name redisBhavesh -v
volumeBhavesh:/data redis:latest

```
Terminal — -zsh — 80x24
Raghav ~ % docker run -d --name redisrajkamboj -v volumeraghav:/data redis:late
st
4b663aeb9c719dbc0dd12f19b1453426004801fef9adef78f699b4d5600e930
Raghav ~ % docker ps -a
CONTAINER ID   IMAGE      COMMAND                  CR
EATED         STATUS    PORTS
NAMES
4b663aeb9c71   redis:latest   "docker-entrypoint.s..."   9
seconds ago   Up 8 seconds   6379/tcp
redisrajkamboj
56824fdef902   redis        "docker-entrypoint.s..."   8
minutes ago   Up 8 minutes   6379/tcp
ecstatic_mclean
a21c90e09138   gcr.io/k8s-minikube/kicbase:v0.0.45   "/usr/local/bin/entr..."   2
weeks ago     Exited (255) 11 minutes ago   127.0.0.1:55000->22/tcp, 127.0.0.1:5
5001->2376/tcp, 127.0.0.1:55002->5000/tcp, 127.0.0.1:55003->8443/tcp, 127.0.0.1:
55004->32443/tcp   minikube
41491f9c3817   9fba7e5fadd5   "docker-entrypoint.s..."   6
weeks ago     Exited (255) 6 weeks ago     6379/tcp
Microsoft 365 israjkamboj
```

this
creates another container

