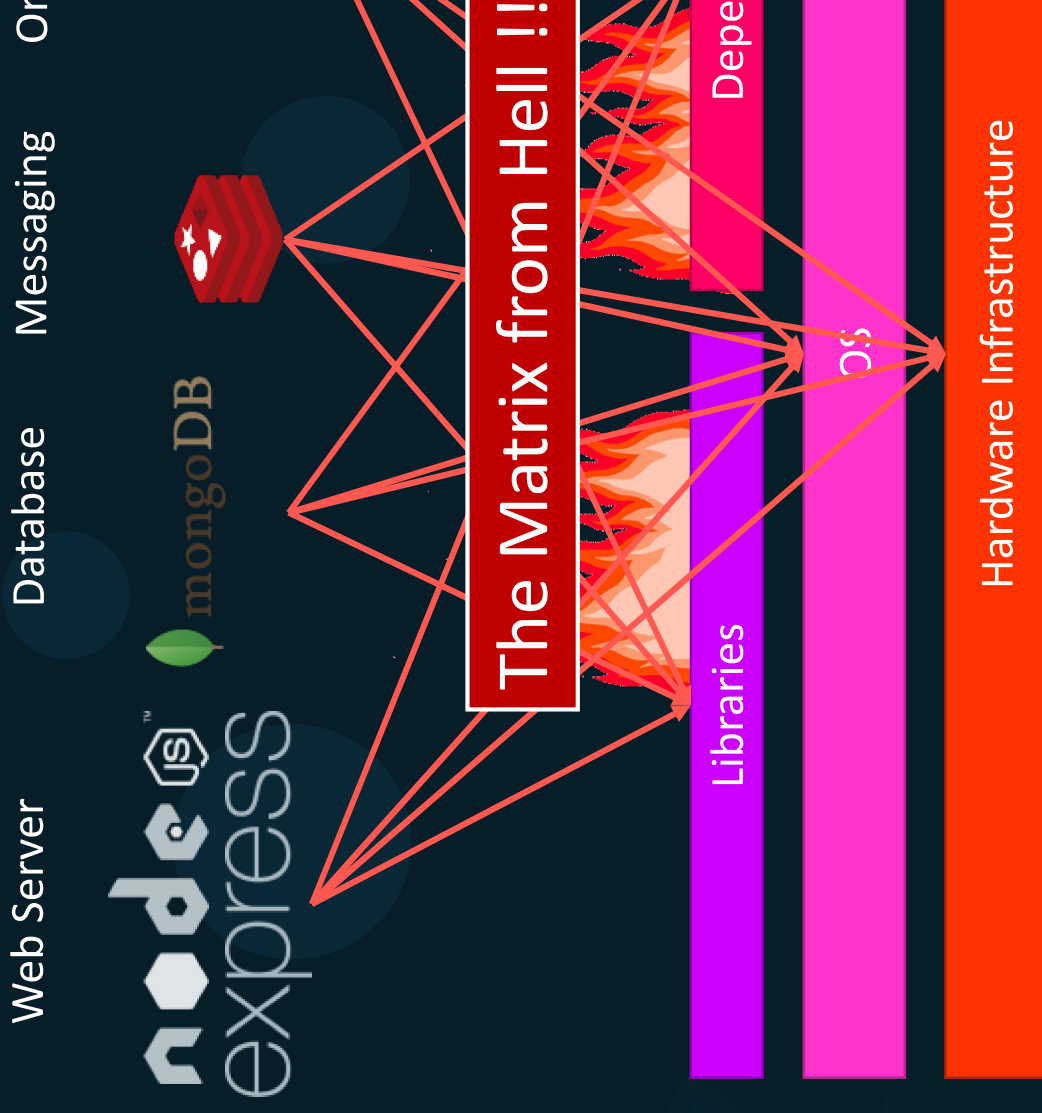


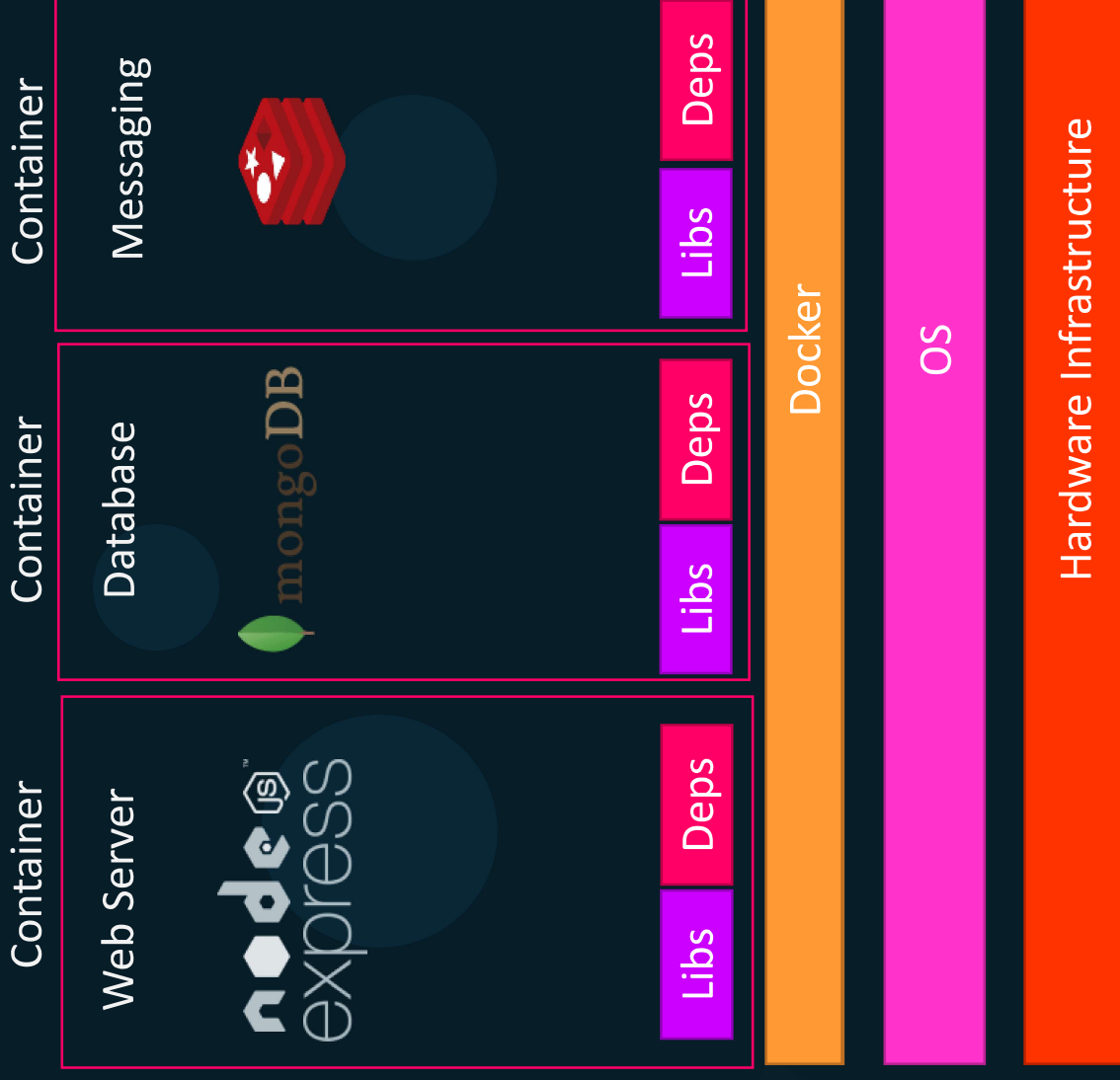
Why do you need docker?

- Compatibility/Dependency
- Long setup time
- Different Dev/Test/Prod environments

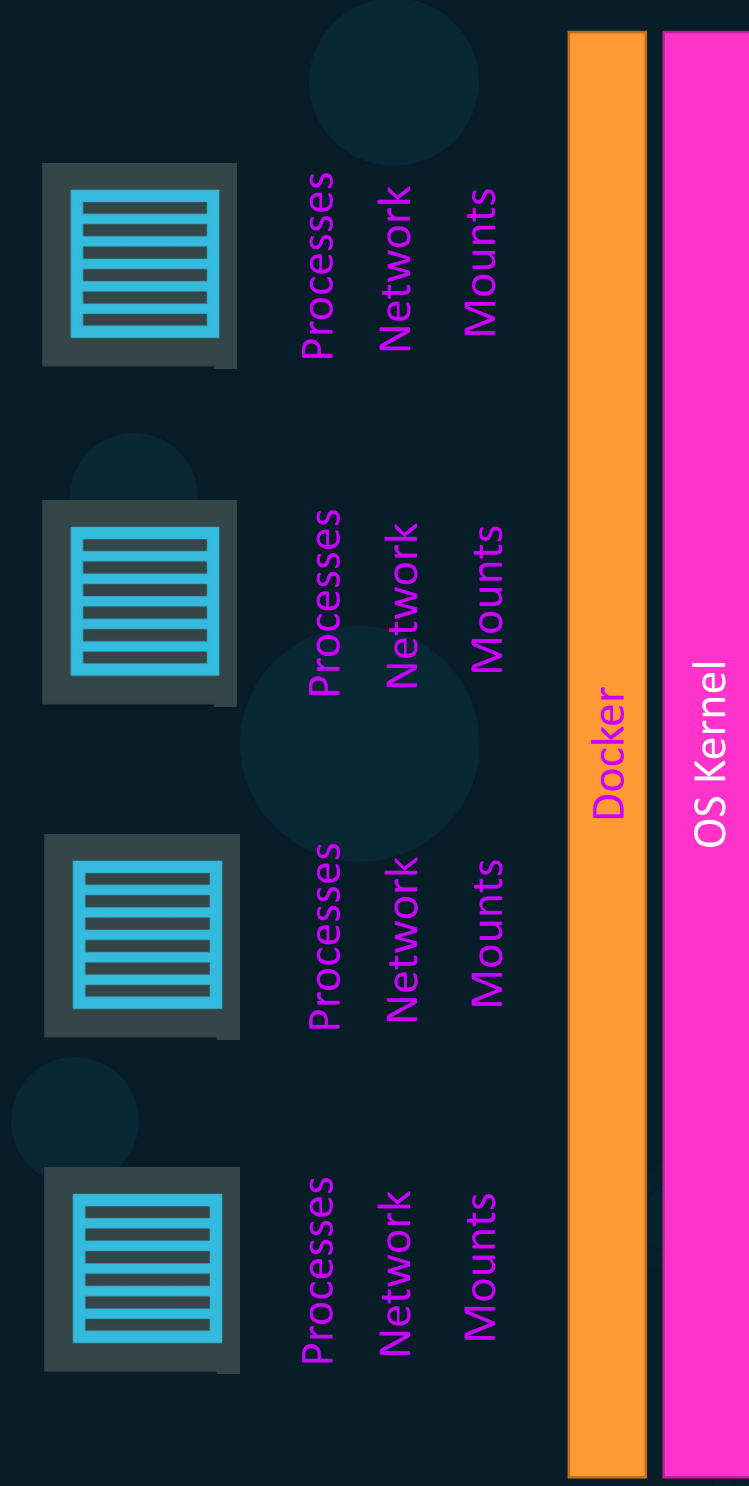


What can it do?

- Containerize Applications
- Run each service with its own dependencies in separate containers



What are containers?



Operating System



OS

Software

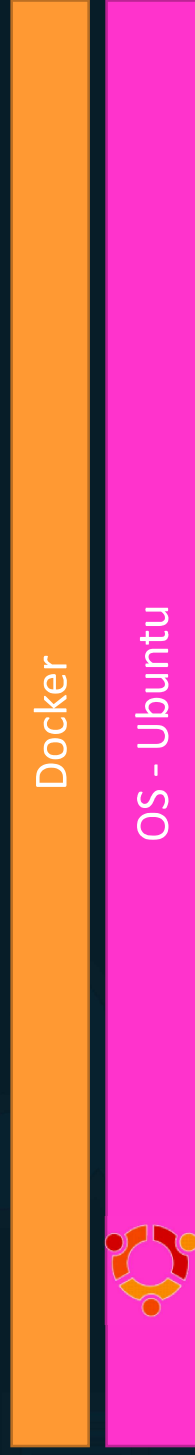
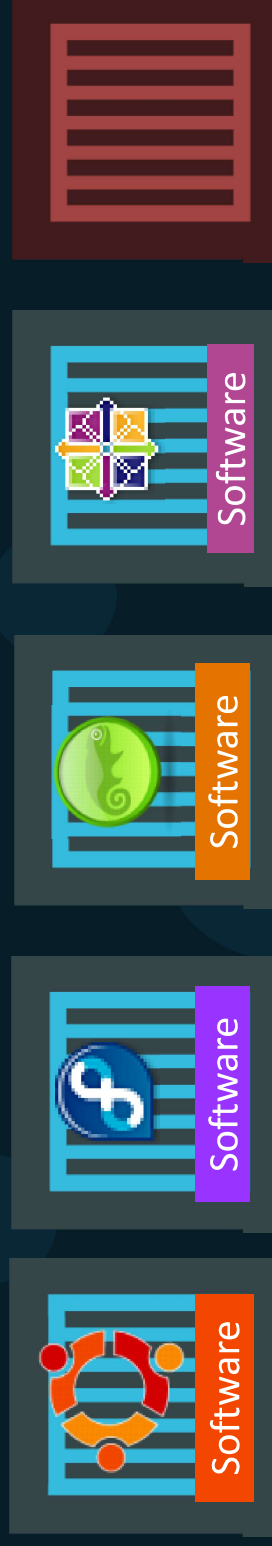
Software

Software

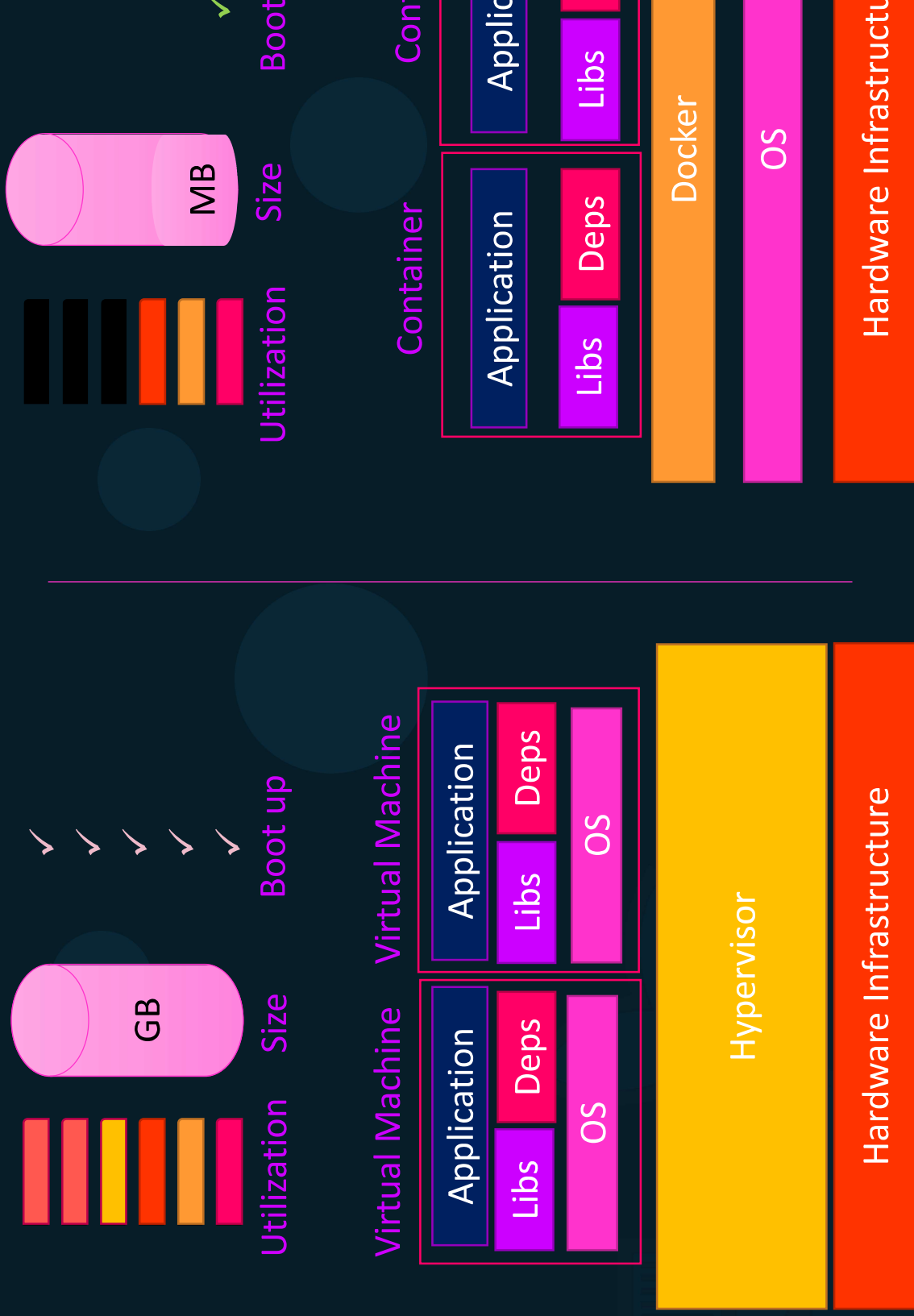
Software

OS Kernel

Sharing the kernel



Containers vs Virtual Machines



Containers & Virtual Machines

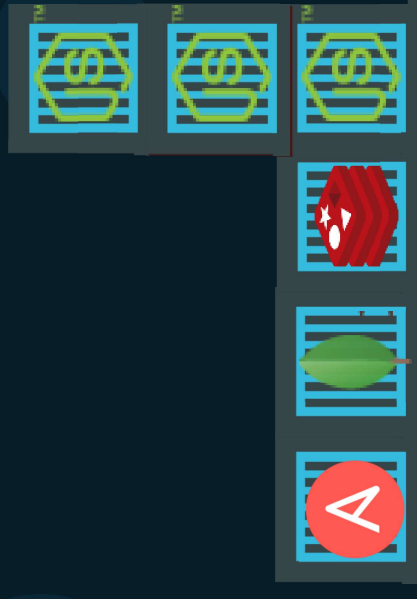


How is it done?

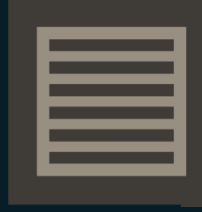
```
docker run ansible
docker run mongodb
docker run redis
docker run nodejs
docker run nodejs
docker run nodejs
```



Public Docker registry - dockerhub



Container vs image

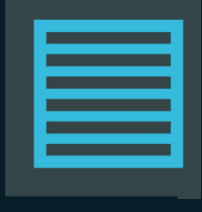


Docker Image

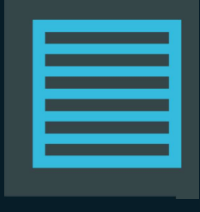
Package
Template
Plan



Docker Container #1



Docker Container #2



Docker Container #3



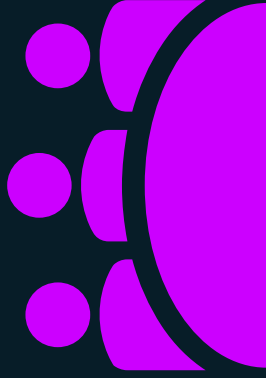
{KODE}CLOUD

d o c k e r

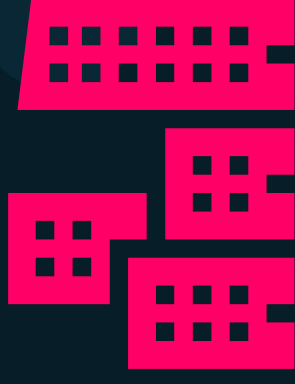
Getting Started



Docker Editions

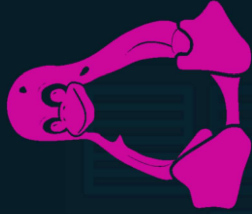


Community Edition

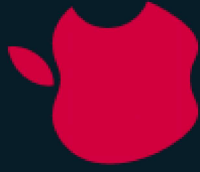


Enterprise Edition

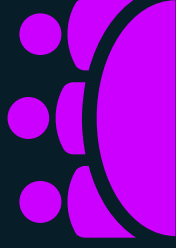
Community Edition



Linux



MAC



Windows



Cloud



{KODE}CLOUD

docker

commands



Run – start a container

```
▲ docker run nginx
```

```
Unable to find image 'nginx:latest' locally
latest: Pulling from library/nginx
fc7181108d40: Already exists
d2e987ca2267: Pull complete
0b760b431b11: Pull complete
Digest:
sha256:96fb261b66270b900ea5a2c17a26abbfab95506e73c3a3c65869a6dbe83223a
Status: Downloaded newer image for nginx:latest
```


ps – list containers

▶ docker ps

CONTAINER ID	IMAGE	COMMAND	CREATED	STATUS	PORTS
796856ac413d	nginx	"nginx -g 'daemon of..."	7 seconds ago	Up 6 seconds	80/tcp

▶ docker ps -a

CONTAINER ID	IMAGE	COMMAND	CREATED	STATUS
796856ac413d	nginx	"nginx -g 'daemon of..."	7 seconds ago	Up 6 seconds
cff8ac918a2f	redis	"docker-entrypoint.s..."	6 seconds ago	Exited (0) 3 seconds ago

STOP – stop a container

▶ `docker ps`

CONTAINER ID	IMAGE	COMMAND	CREATED	STATUS	PORTS
796856ac413d	nginx	"nginx -g 'daemon of...'"	7 seconds ago	Up 6 seconds	80/tcp

▶ `docker stop silly_sammet`

silly_sammet

▶ `docker ps -a`

CONTAINER ID	IMAGE	COMMAND	CREATED	STATUS
796856ac413d	nginx	"nginx -g 'daemon of...'"	7 seconds ago	Exited (0) 3 seconds ago
cff8ac918a2f	redis	"docker-entrypoint.s..."	6 seconds ago	Exited (0) 3 seconds ago

Rm – Remove a container

```
▶ docker rm silly_sammet
```

```
silly_sammet
```

```
▶ docker ps -a
```

CONTAINER ID	IMAGE	COMMAND	CREATED	STATUS
cff8ac918a2f	redis	"docker-entrypoint.s..."	6 seconds ago	Exited (0) 3 seconds ago

images – List images

docker images				
REPOSITORY	TAG	IMAGE ID	CREATED	SIZE
nginx	latest	f68d6e55e065	4 days ago	109MB
redis	latest	4760dc956b2d	15 months ago	107MB
ubuntu	latest	f975c5035748	16 months ago	112MB
alpine	latest	3fd9065eaf02	18 months ago	4.14MB

rmi – Remove images

```
▲ docker rmi nginx
```

```
Untagged: nginx:latest
Untagged: nginx@sha256:96fb261b66270b900ea5a2c17a26abbfab95506e73c3a3c65869a6dbe83223a
Deleted: sha256:f68d6e55e06520f152403e6d96d0de5c9790a89b4cfc99f4626f68146fa1dbdc
Deleted: sha256:1b0c768769e2bb66e74a205317ba531473781a78b77feef8ea6fd7be7f4044e1
Deleted: sha256:34138fb60020a180e512485fb96fd42e286fb0d86cf1fa2506b11ff6b945b03f
Deleted: sha256:cf5b3c6798f77b1f78bf4e297b27cfa5b6caa982f04caeb5de7d13c255fd7a1e
```

! Delete all dependent containers to remove image

Pull – download an image

▶ docker run nginx

```
Unable to find image 'nginx:latest' locally
latest: Pulling from library/nginx
fc7181108d40: Already exists
d2e987ca2267: Pull complete
0b760b431b11: Pull complete
Digest:
sha256:96fb261b66270b900ea5a2c17a26abbfab95506e73c3a3c65869a6dbe83223a
Status: Downloaded newer image for nginx:latest
```

▶ docker pull nginx

```
Using default tag: latest
latest: Pulling from library/nginx
fc7181108d40: Pull complete
d2e987ca2267: Pull complete
0b760b431b11: Pull complete
Digest:
sha256:96fb261b66270b900ea5a2c17a26abbfab95506e73c3a3c65869a6dbe83223a
Status: Downloaded newer image for nginx:latest
```

▶ docker run ubuntu

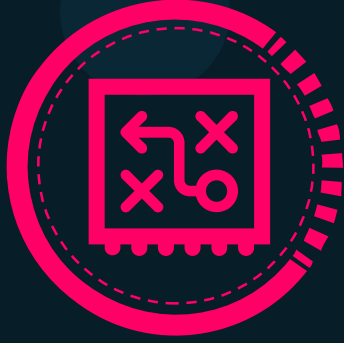
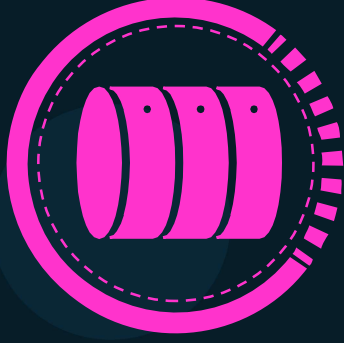
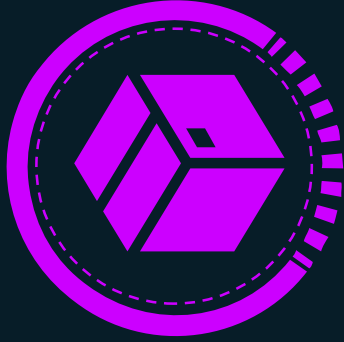
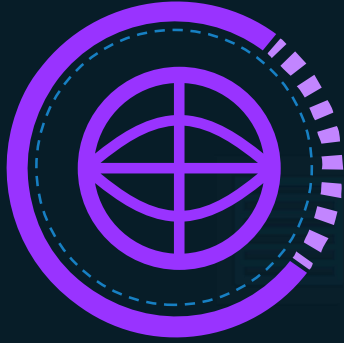
▶ docker ps

CONTAINER ID	IMAGE	COMMAND	CREATED	STATUS
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▶ docker ps -a

CONTAINER ID 45aacca36850	IMAGE ubuntu	COMMAND "/bin/bash"	CREATED 43 seconds ago	STATUS Exited (0) 41 se
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▶ docker run ubuntu



▶ docker ps

CONTAINER ID	IMAGE	COMMAND	CREATED	STATUS
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▶ docker ps -a

CONTAINER ID	IMAGE	COMMAND	CREATED	STATUS
45aacca36850	ubuntu	"/bin/bash"	43 seconds ago	Exited (0) 41 se