

Docker command

Docker command

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Docker engine includes Docker CLI, which provides command line tools for interacting with Docker daemon. This tutorial introduces the usage of common Docker commands.

1. View detailed information

docker info

```
docker info
```

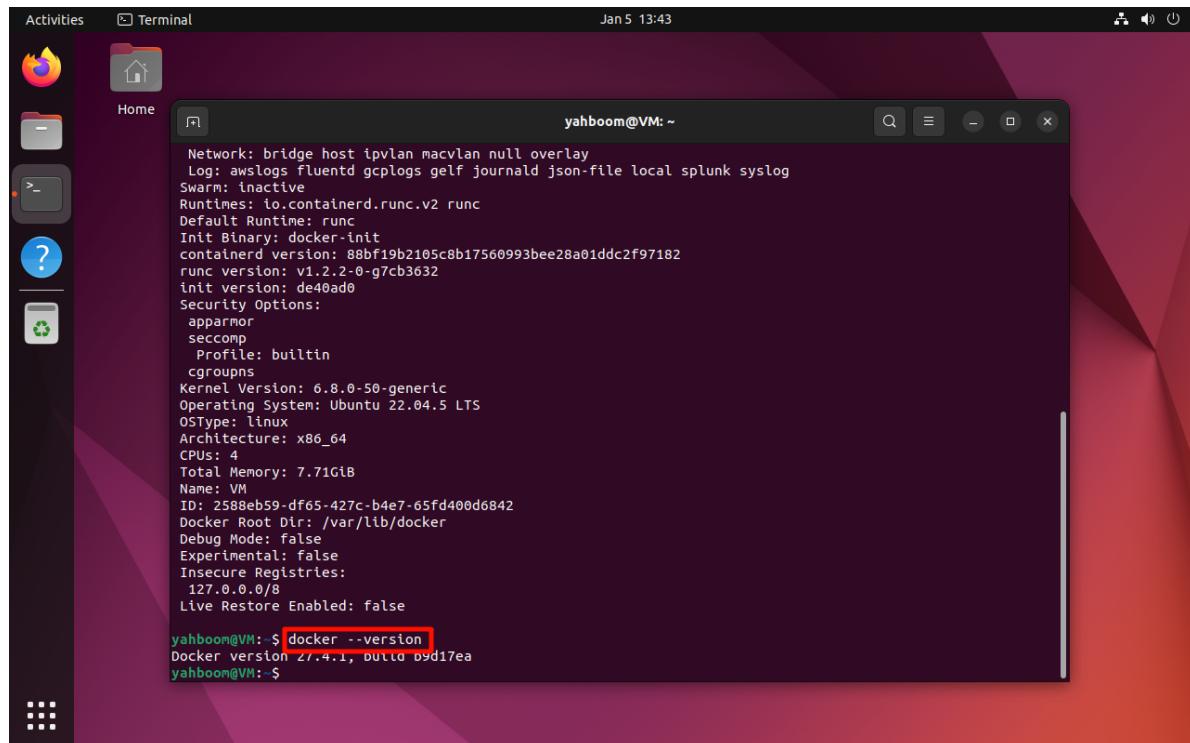
```
yahboom@VM: ~ docker info
Client: Docker Engine - Community
  Version: 27.4.1
  Context: default
  Debug Mode: false
  Plugins:
    buildx: Docker Buildx (Docker Inc.)
      Version: v0.19.3
      Path: /usr/libexec/docker/cli-plugins/docker-buildx
    compose: Docker Compose (Docker Inc.)
      Version: v2.32.1
      Path: /usr/libexec/docker/cli-plugins/docker-compose

Server:
  Containers: 0
  Running: 0
  Paused: 0
  Stopped: 0
  Images: 0
  Server Version: 27.4.1
  Storage Driver: overlay2
    Backing Filesystem: extfs
    Supports d_type: true
    Using metacopy: false
    Native Overlay Diff: true
  userxattr: false
  Logging Driver: json-file
  Cgroup Driver: systemd
  Cgroup Version: 2
  Plugins:
    Volume: local
    Network: bridge host ipvlan macvlan null overlay
```

2. View the version number

docker --version

```
docker --version
```



A screenshot of a Ubuntu desktop environment. A terminal window titled "Home" is open, showing the output of the "docker --version" command. The terminal shows the Docker daemon's configuration and the command being run.

```
Network: bridge host ipvlan macvlan null overlay
Log: awslogs fluentd gcplogs gelf journalctl json-file local splunk syslog
Swarm: inactive
Runtimes: io.contalnerd.runc.v2 runc
Default Runtime: runc
Init Binary: docker-init
containerd version: 88bf19b2105c8b17560993bee28a01ddc2f97182
runc version: v1.2.2-0-g7cb3632
init version: de40ad0
Security Options:
    apparmor
    seccomp
        Profile: builtin
    cgroups
Kernel Version: 6.8.0-50-generic
Operating System: Ubuntu 22.04.5 LTS
OSType: linux
Architecture: x86_64
CPUs: 4
Total Memory: 7.71GiB
Name: VM
ID: 2588eb59-df65-427c-b4e7-65fd400d6842
Docker Root Dir: /var/lib/docker
Debug Mode: false
Experimental: false
Insecure Registries:
    127.0.0.0/8
Live Restore Enabled: false
yahboon@VM: ~ docker --version
Docker version 27.4.1, build b9d17ea
yahboon@VM: ~
```

3. Pull the image

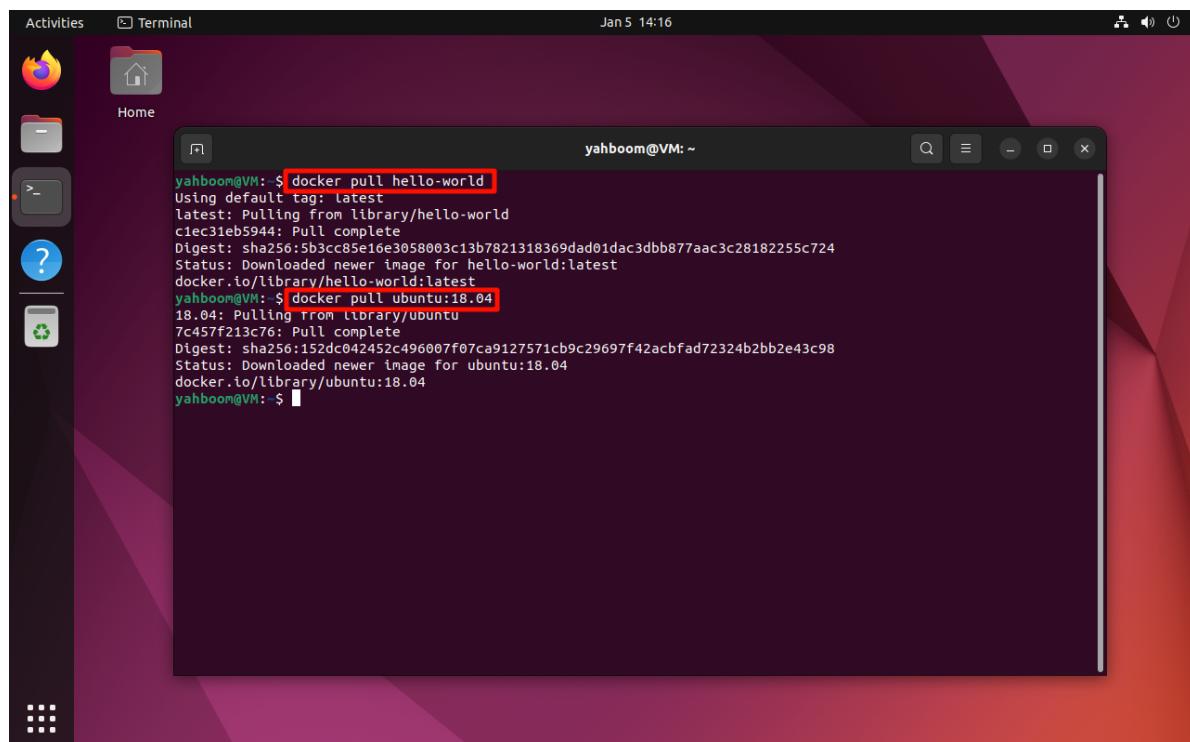
```
docker pull <image_name>
```

If no tag is specified, the image with the `latest` tag will be pulled by default.

```
docker pull hello-world
```

```
docker pull <image_name>:
```

```
docker pull ubuntu:18.04
```



A screenshot of a Ubuntu desktop environment showing two terminal windows. The first terminal window shows the pull of the "hello-world" image. The second terminal window shows the pull of the "ubuntu:18.04" image.

```
yahboon@VM: ~ docker pull hello-world
Using default tag: latest
latest: Pulling from library/hello-world
c1ec31eb5944: Pull complete
Digest: sha256:5b3cc85e16e3058003c13b7821318369dad01dac3dbb877aac3c28182255c724
Status: Downloaded newer image for hello-world:latest
docker.io/library/hello-world:latest
yahboon@VM: ~ docker pull ubuntu:18.04
18.04: Pulling from library/ubuntu
7c457f213c76: Pull complete
Digest: sha256:152dc042452c496007f07ca9127571cb9c29697f42acbfad72324b2bb2e43c98
Status: Downloaded newer image for ubuntu:18.04
docker.io/library/ubuntu:18.04
yahboon@VM: ~
```

4. Run the image

If there is no image to be run locally, docker will automatically pull the corresponding image.

```
docker run <image_name>
```

```
docker run hello-world
```

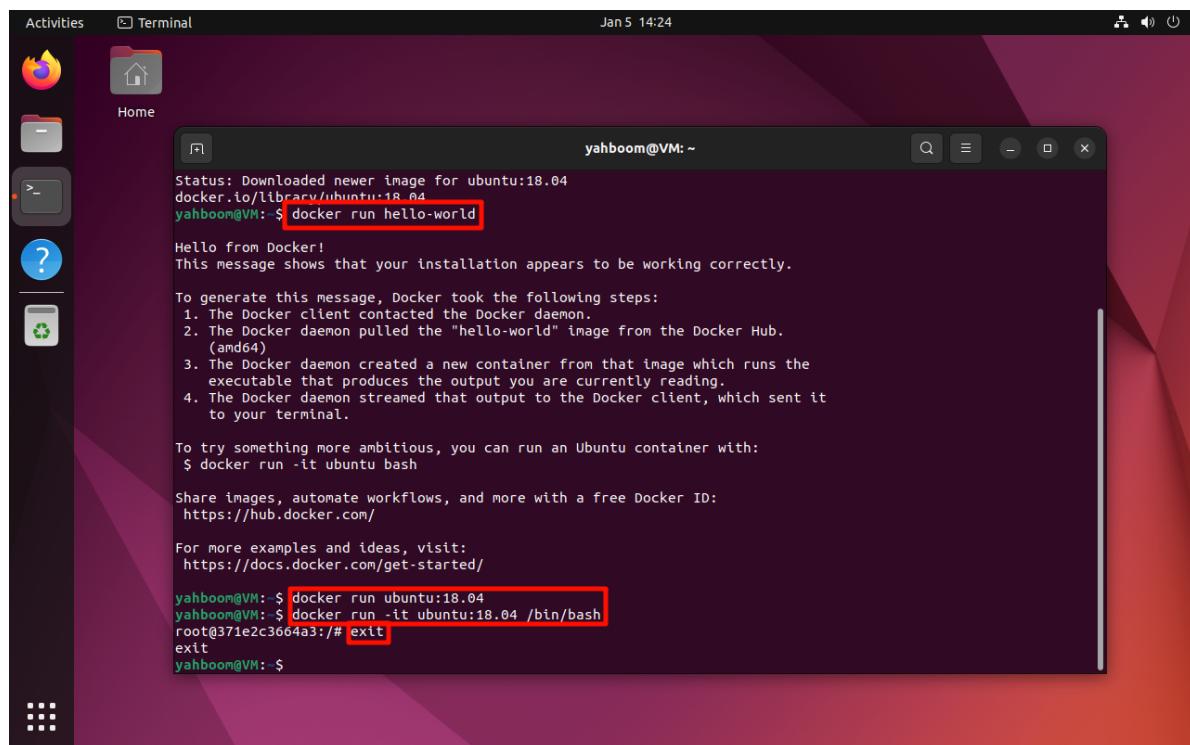
```
docker pull <image_name>:
```

Start the specified container and exit:

```
docker run ubuntu:18.04
```

Start the specified container in interactive mode: Enter `exit` to exit

```
docker run -it ubuntu:18.04 /bin/bash
```



A screenshot of a Linux desktop environment with a dark theme. A terminal window titled "Terminal" is open, showing the output of Docker commands. The terminal window is located in the Activities overview. The terminal content includes:

```
yahboom@VM: ~
Status: Downloaded newer image for ubuntu:18.04
docker.io/library/ubuntu:18.04
yahboom@VM: $ docker run hello-world
Hello from Docker!
This message shows that your installation appears to be working correctly.

To generate this message, Docker took the following steps:
1. The Docker client contacted the Docker daemon.
2. The Docker daemon pulled the "hello-world" image from the Docker Hub.
   (amd64)
3. The Docker daemon created a new container from that image which runs the
   executable that produces the output you are currently reading.
4. The Docker daemon streamed that output to the Docker client, which sent it
   to your terminal.

To try something more ambitious, you can run an Ubuntu container with:
$ docker run -it ubuntu bash

Share images, automate workflows, and more with a free Docker ID:
https://hub.docker.com/

For more examples and ideas, visit:
https://docs.docker.com/get-started/
yahboom@VM: $ docker run ubuntu:18.04
yahboom@VM: $ docker run -it ubuntu:18.04 /bin/bash
root@371e2c3664a3:/# exit
yahboom@VM: ~
```

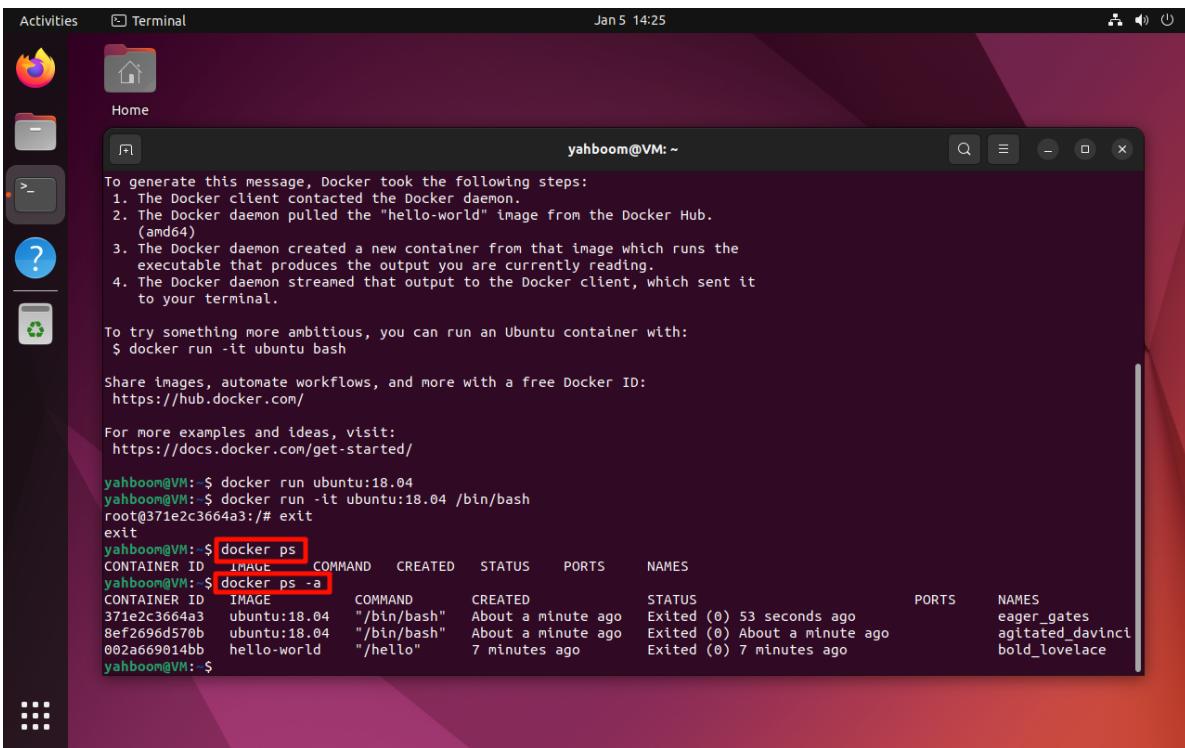
4.1. View the running image

```
docker ps
```

```
docker ps
```

4.2. View the running or stopped image

```
docker ps -a
```



To generate this message, Docker took the following steps:
1. The Docker client contacted the Docker daemon.
2. The Docker daemon pulled the "hello-world" image from the Docker Hub.
(amd64)
3. The Docker daemon created a new container from that image which runs the executable that produces the output you are currently reading.
4. The Docker daemon streamed that output to the Docker client, which sent it to your terminal.

To try something more ambitious, you can run an Ubuntu container with:
\$ docker run -it ubuntu bash

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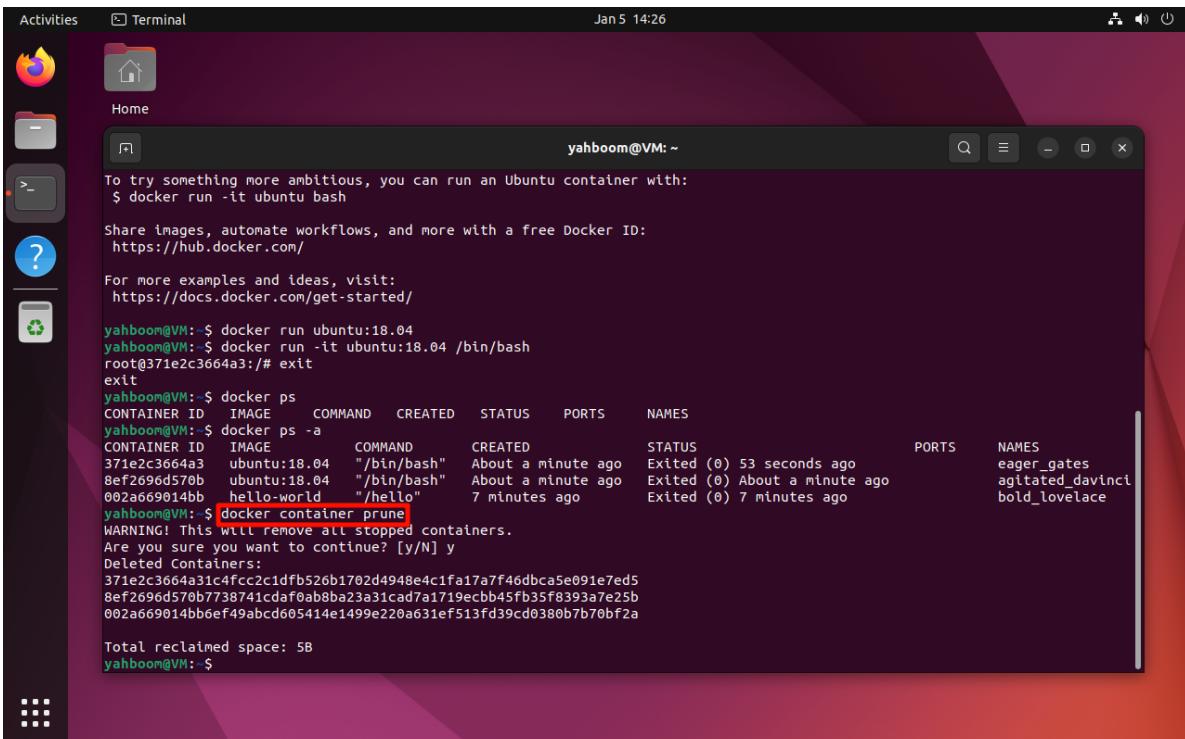
For more examples and ideas, visit:
<https://docs.docker.com/get-started/>

```
yahboom@VM:~$ docker run ubuntu:18.04
yahboom@VM:~$ docker run -it ubuntu:18.04 /bin/bash
root@371e2c3664a3:/# exit
exit
yahboom@VM:~$ docker ps
CONTAINER ID IMAGE COMMAND CREATED STATUS PORTS NAMES
yahboom@VM:~$ docker ps -a
CONTAINER ID IMAGE COMMAND CREATED STATUS PORTS NAMES
371e2c3664a3 ubuntu:18.04 "/bin/bash" About a minute ago Exited (0) 53 seconds ago
8ef2696d570b ubuntu:18.04 "/bin/bash" About a minute ago Exited (0) About a minute ago
002a669014bb hello-world "/hello" 7 minutes ago Exited (0) 7 minutes ago
yahboom@VM:~$
```

5. Clean up images

docker container prune

docker container prune



To try something more ambitious, you can run an Ubuntu container with:
\$ docker run -it ubuntu bash

Share images, automate workflows, and more with a free Docker ID:
<https://hub.docker.com/>

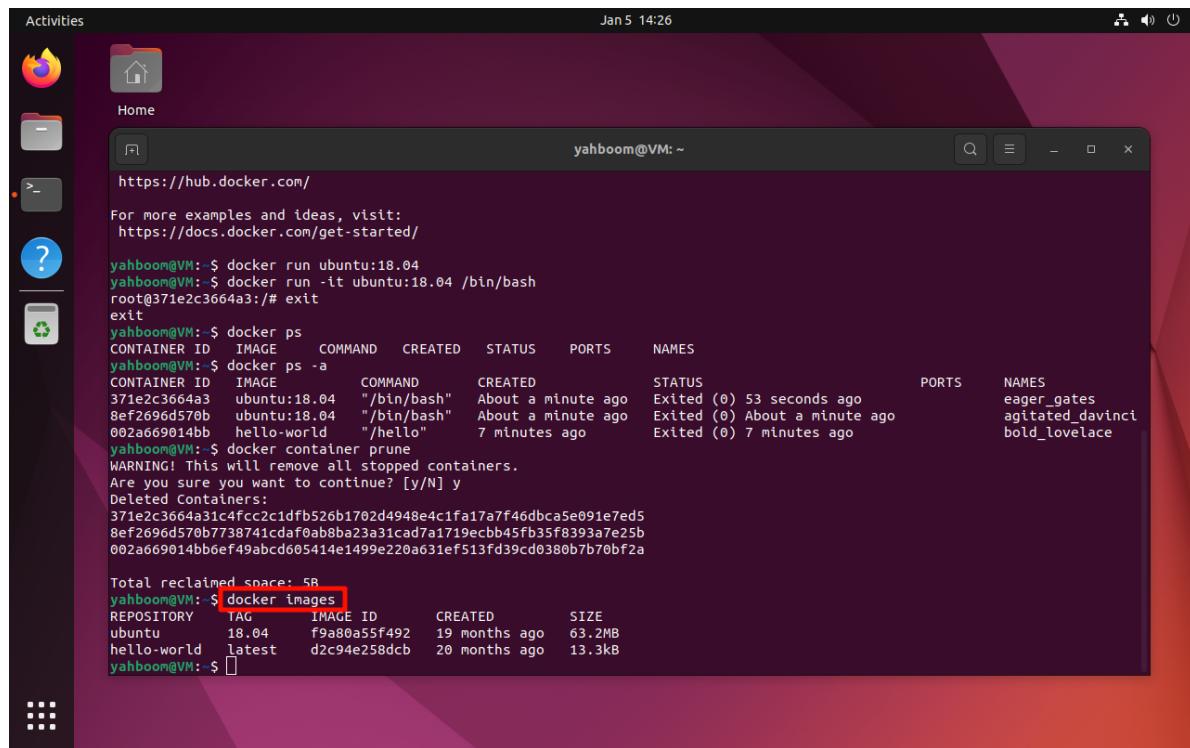
For more examples and ideas, visit:
<https://docs.docker.com/get-started/>

```
yahboom@VM:~$ docker run ubuntu:18.04
yahboom@VM:~$ docker run -it ubuntu:18.04 /bin/bash
root@371e2c3664a3:/# exit
exit
yahboom@VM:~$ docker ps
CONTAINER ID IMAGE COMMAND CREATED STATUS PORTS NAMES
yahboom@VM:~$ docker ps -a
CONTAINER ID IMAGE COMMAND CREATED STATUS PORTS NAMES
371e2c3664a3 ubuntu:18.04 "/bin/bash" About a minute ago Exited (0) 53 seconds ago
8ef2696d570b ubuntu:18.04 "/bin/bash" About a minute ago Exited (0) About a minute ago
002a669014bb hello-world "/hello" 7 minutes ago Exited (0) 7 minutes ago
yahboom@VM:~$ docker container prune
WARNING! This will remove all stopped containers.
Are you sure you want to continue? [y/N] y
Deleted Containers:
371e2c3664a31c4fc2c1dfb526b1702d4948e4c1fa17a7f46dbc5e091e7ed5
8ef2696d570b7738741cdaf0ab8ba23a31cad7a1719ecbb45fb35f8393a7e25b
002a669014bb605414e1499e220a631ef513fd39cd0380b7b70bf2a
Total reclaimed space: 5B
yahboom@VM:~$
```

6. View local images

docker images

docker images



```
Activities Jan 5 14:26
Home https://hub.docker.com/
yahboom@VM: ~
https://hub.docker.com/
For more examples and ideas, visit: https://docs.docker.com/get-started/
yahboom@VM:~$ docker run ubuntu:18.04
yahboom@VM:~$ docker run -it ubuntu:18.04 /bin/bash
root@371e2c3664a3:/# exit
yahboom@VM:~$ docker ps
CONTAINER ID IMAGE COMMAND CREATED STATUS PORTS NAMES
yahboom@VM:~$ docker ps -a
CONTAINER ID IMAGE COMMAND CREATED STATUS PORTS NAMES
371e2c3664a3 ubuntu:18.04 "/bin/bash" About a minute ago Exited (0) 53 seconds ago
8ef2696d570b ubuntu:18.04 "/bin/bash" About a minute ago Exited (0) About a minute ago
002a669014bb hello-world "/hello" 7 minutes ago Exited (0) 7 minutes ago
yahboom@VM:~$ docker container prune
WARNING! This will remove all stopped containers.
Are you sure you want to continue? [y/N] y
Deleted Containers:
371e2c3664a31c4fc2c1dfb526b1702d4948e4c1fa17a7f46dbca5e091e7ed5
8ef2696d570b7738741cdaf0ab8ba23a31cad7a1719ecbb45fb35f8393a7e25b
002a669014bb6ef49abcd605414e1499e220a631ef513fd39cd0380b7b70bf2a

Total reclaimed space: 5B
yahboom@VM:~$ docker images
REPOSITORY TAG IMAGE ID CREATED SIZE
ubuntu 18.04 f9a80a55f492 19 months ago 63.2MB
hello-world latest d2c94e258dcb 20 months ago 13.3kB
yahboom@VM:~$
```

7. Delete images

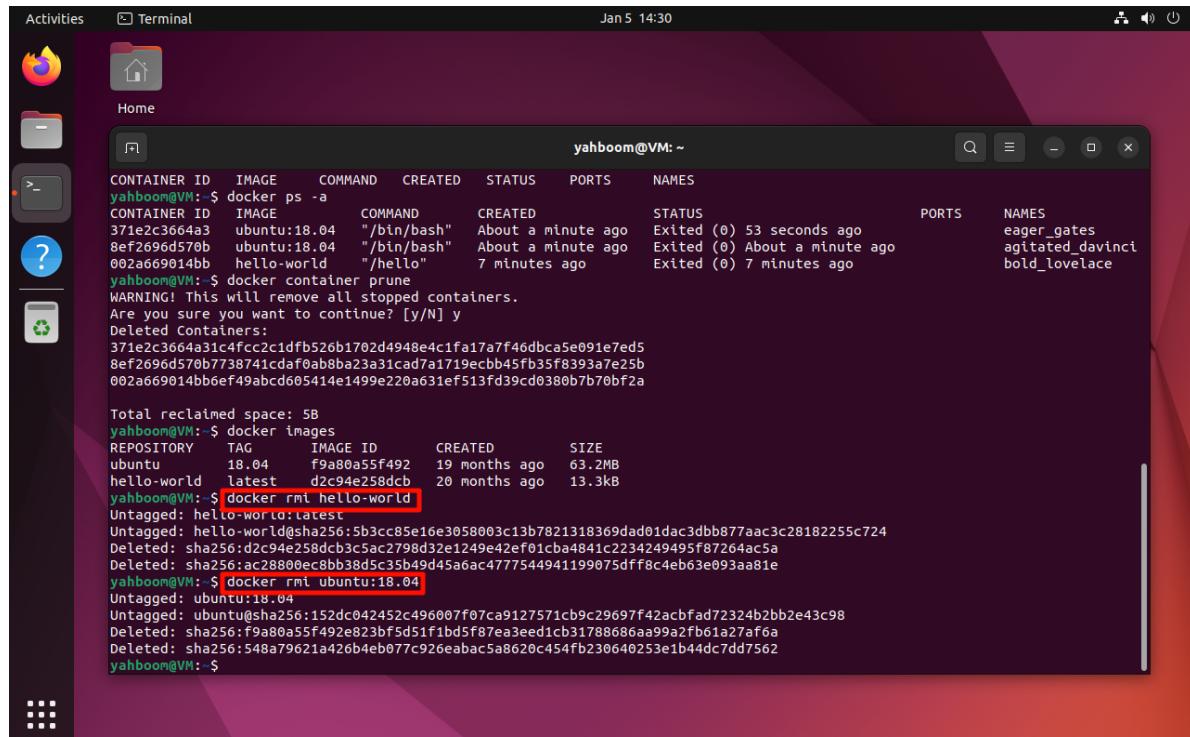
Note: The image to be deleted needs to be stopped and cleaned up

```
| docker rmi <image_name>
```

```
docker rmi hello-world
```

```
| docker rmi <image_name>:
```

```
docker rmi ubuntu:18.04
```



```
Activities Jan 5 14:30
Terminal
Home https://hub.docker.com/
yahboom@VM: ~
https://hub.docker.com/
For more examples and ideas, visit: https://docs.docker.com/get-started/
yahboom@VM:~$ docker ps
CONTAINER ID IMAGE COMMAND CREATED STATUS PORTS NAMES
yahboom@VM:~$ docker ps -a
CONTAINER ID IMAGE COMMAND CREATED STATUS PORTS NAMES
371e2c3664a3 ubuntu:18.04 "/bin/bash" About a minute ago Exited (0) 53 seconds ago
8ef2696d570b ubuntu:18.04 "/bin/bash" About a minute ago Exited (0) About a minute ago
002a669014bb hello-world "/hello" 7 minutes ago Exited (0) 7 minutes ago
yahboom@VM:~$ docker container prune
WARNING! This will remove all stopped containers.
Are you sure you want to continue? [y/N] y
Deleted Containers:
371e2c3664a31c4fc2c1dfb526b1702d4948e4c1fa17a7f46dbca5e091e7ed5
8ef2696d570b7738741cdaf0ab8ba23a31cad7a1719ecbb45fb35f8393a7e25b
002a669014bb6ef49abcd605414e1499e220a631ef513fd39cd0380b7b70bf2a

Total reclaimed space: 5B
yahboom@VM:~$ docker images
REPOSITORY TAG IMAGE ID CREATED SIZE
ubuntu 18.04 f9a80a55f492 19 months ago 63.2MB
hello-world latest d2c94e258dcb 20 months ago 13.3kB
yahboom@VM:~$ docker rmi hello-world
Untagged: hello-world:latest
Untagged: hello-world@sha256:5b3cc85e16e3058003c13b7821318369dad01dac3dbb877aac3c28182255c724
Deleted: sha256:d2c94e258dcba5c2798d32e1249e42ef01cba4841c2234249495f87264ac5a
Deleted: sha256:ac28800ec8bb3d5c35b49d45a6ac4777544941199075dff8c4eb63e093aa81e
yahboom@VM:~$ docker rmi ubuntu:18.04
Untagged: ubuntu:18.04
Untagged: ubuntu@sha256:152dc042452c496007f07ca9127571cb9c29697f42acbfad72324b2bb2e43c98
Deleted: sha256:f9a80a55f492e823bf5d1f1bd5f87ea3eed1cb31788686aa99a2fb61a27af6a
Deleted: sha256:548a79621a426b4eb077c926eabac5a8620c454fb230640253e1b44dc7dd7562
yahboom@VM:~$
```

8. Submit the image

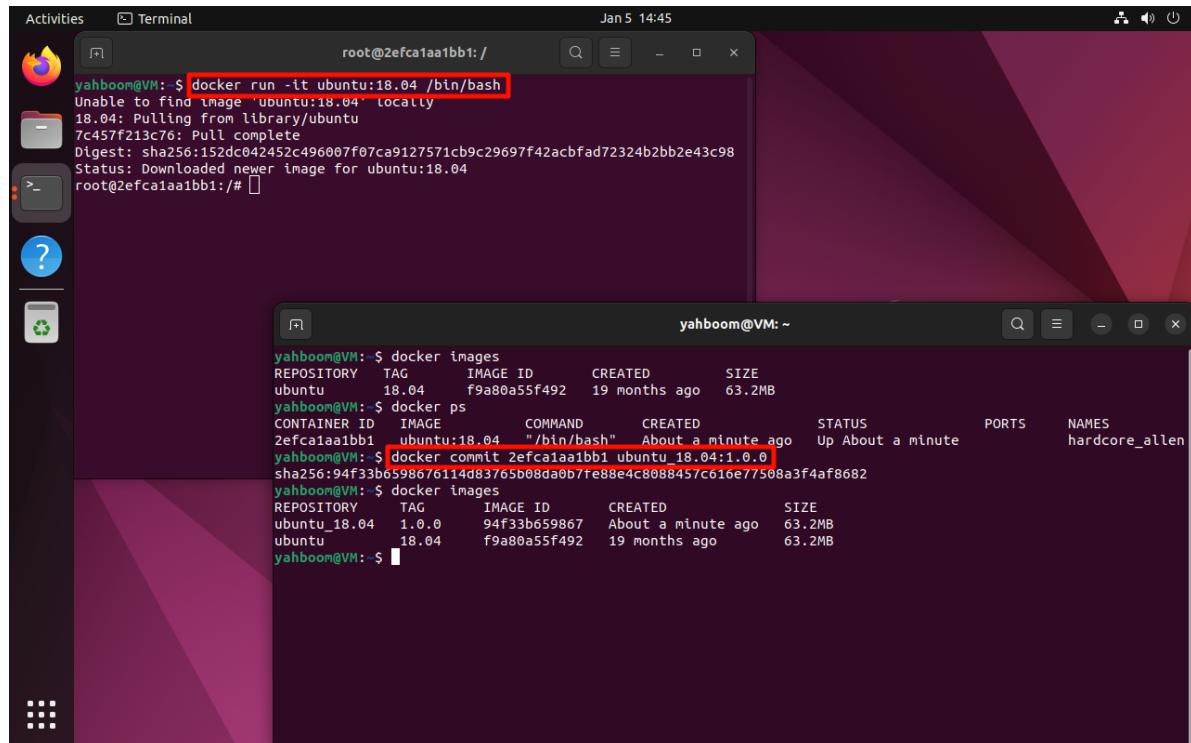
Pull and run the ubuntu:18.04 image in interactive mode

```
docker run -it ubuntu:18.04 /bin/bash
```

docker commit <image_name>:

Note: Modify according to the actual `CONTAINER ID`

```
docker commit 2efca1aa1bb1 ubuntu_18.04:1.0.0
```



9. Stop the image

If you run the container in interactive mode and the terminal enters the container, you can enter `exit` in the container to stop the container;

If you close the container externally, you can use the `docker stop` command.

docker stop

Note: Modify according to the actual `CONTAINER ID`

```
docker stop 2efca1aa1bb1
```

```
yahboom@VM: ~$ docker run -it ubuntu:18.04 /bin/bash
Unable to find image 'ubuntu:18.04' locally
18.04: Pulling from library/ubuntu
7c457f213c76: Pull complete
Digest: sha256:152dc042452c496007f07ca9127571cb9c29697f42acbfad72324b2bb2e43c98
Status: Downloaded newer image for ubuntu:18.04
root@2efca1aa1bb1:/# exit
yahboom@VM: ~
```



```
yahboom@VM: ~$ docker images
REPOSITORY TAG IMAGE ID CREATED SIZE
ubuntu 18.04 f9a80a55f492 19 months ago 63.2MB
yahboom@VM: ~$ docker ps
CONTAINER ID IMAGE COMMAND CREATED STATUS PORTS NAMES
2efca1aa1bb1 ubuntu:18.04 "/bin/bash" About a minute ago Up About a minute
yahboom@VM: ~$ docker commit 2efca1aa1bb1 ubuntu 18.04:1.0.0
sha256:94f3b6598676114d83765b08da0b7fe88e4c8088457c616e77508a3f4af8682
yahboom@VM: ~$ docker images
REPOSITORY TAG IMAGE ID CREATED SIZE
ubuntu_18.04 1.0.0 94f3b659867 About a minute ago 63.2MB
ubuntu 18.04 f9a80a55f492 19 months ago 63.2MB
yahboom@VM: ~$ docker stop 2efca1aa1bb1
2efca1aa1bb1
yahboom@VM: ~$
```

10. Multiple terminals enter the same container

Containers are isolated from each other. Directly using the command to run the image will start different containers; if you need to perform operations in the same container, you need to use the command to enter the same container.

Run the ubuntu:18.04 image in interactive mode:

```
docker run -it ubuntu:18.04 /bin/bash
```

View the running container:

```
docker ps
```

docker exec

Enter the running container in interactive mode: modify according to the actual `CONTAINER_ID`

```
docker exec -it bc4fcf3ef267 /bin/bash
```

