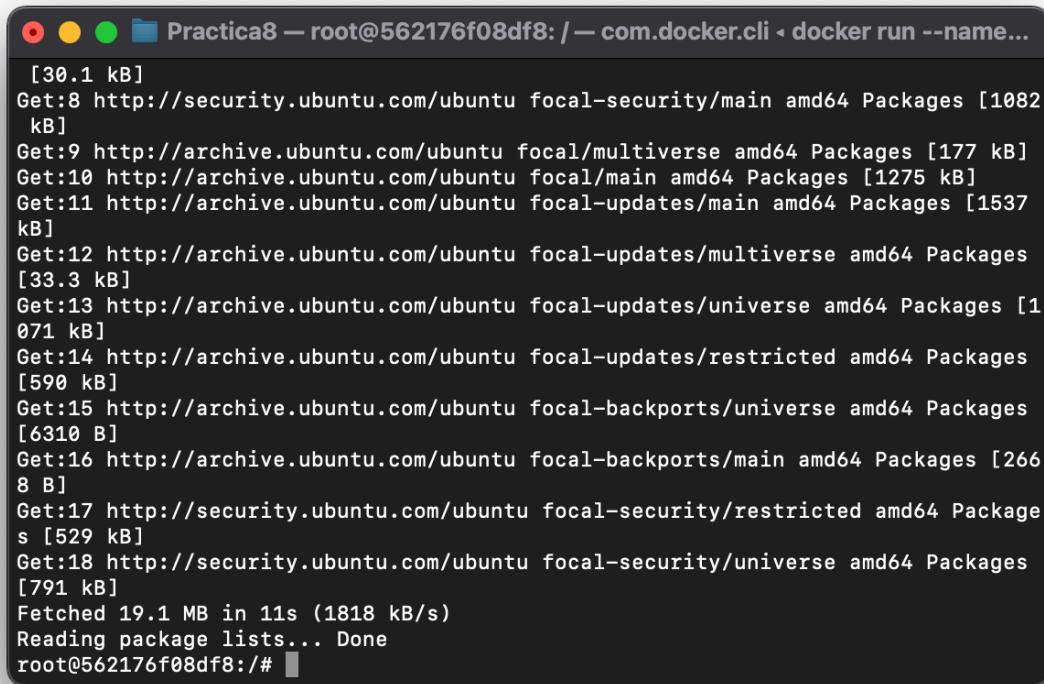


```
miguel@MacBook-Pro-de-Miguel ~ % docker search ubuntu
NAME                                            DESCRIPTION                                     STARS   OFFICIAL   AUTOMATED
ubuntu                                           Ubuntu is a Debian-based Linux operating sys... 12821   [OK]        [OK]
dorowu/ubuntu-desktop-lxde-vnc                 Docker image to provide HTML5 VNC interface ... 566    [OK]        [OK]
wuchhcc/library                                Docker image for Python3 library ...           288    [OK]        [OK]
rastisheep/ubuntu-sshd                         Dockerized SSH service, built on top of offl... 255    [OK]        [OK]
consol/ubuntu-vfce-vnc                         Ubuntu container with "headless" VNC session... 241    [OK]        [OK]
ubuntu-upstart                                 DEPRECATED, as is Upstart (find other proces... 113    [OK]        [OK]
neurodebian                                     NeuroDebian provides neuroscience research s... 85     [OK]        [OK]
iandilinternet/ubuntu-16-nginx-php-phphmyadmin-mysql-5
open-libs                                         Docker image for Open Library API - structure images based... 80     [OK]        [OK]
ubuntu-debootstrapping                         DEPRECATED; use "ubuntu" instead ...           44     [OK]        [OK]
1386/ubuntu                                     Ubuntu is a Debian-based Linux operating sys... 25     [OK]        [OK]
solita/ubuntu-systemd                           Ubuntu + systemd ...                         24     [OK]        [OK]
fmnunes/ubuntu-python3                          Simple alias for latest Ubuntu docker images w... 24     [OK]        [OK]
numagbbs/ubuntu                                ubuntu-16-apache-php-5.6 ...                   14     [OK]        [OK]
iandilinternet/ubuntu-16-apache-php-7.0       ubuntu-16-apache-php-7.0 ...                   13     [OK]        [OK]
iandilinternet/ubuntu-16-apache-php-5.6       ubuntu-16-nginx-php-phphmyadmin-mariadb-10  11     [OK]        [OK]
iandilinternet/ubuntu-16-nginx-php-5.6-wordpress-4
iandilinternet/ubuntu-16-nginx-php-5.6          ubuntu-16-nginx-php-5.6 ...                   9      [OK]        [OK]
iandilinternet/ubuntu-16-apache-php-7.1       ubuntu-16-apache-php-7.1 ...                   7      [OK]        [OK]
iandilinternet/ubuntu-16-nginx-php-7.0       ubuntu-16-nginx-php-7.0 ...                   4      [OK]        [OK]
iandilinternet/ubuntu-16-nginx-php-7.1-wordpress-4
smartentity/ubuntu                             ubuntu with smartentity ...                   1      [OK]        [OK]
iandilinternet/ubuntu-16-php-7.1              ubuntu-16-php-7.1 ...                   1      [OK]        [OK]
iandilinternet/ubuntu-16-rspec                ubuntu-16-rspec ...                      0      [OK]        [OK]
miguel@MacBook-Pro-de-Miguel ~ % docker pull ubuntu
Using default tag: latest
latest: Pulling from library/ubuntu
Digest: sha256:9d6a8699fb5c9c39cf08a0871bd6219f0400981c570894cd8cbea30d3424a31f
Status: Image is up to date for ubuntu:latest
docker.io/library/ubuntu:latest
miguel@MacBook-Pro-de-Miguel ~ %
```

```
miguel@MacBook-Pro-de-Miguel ~ % docker run --name ubuntu01 -p 2222:22 -it ubuntuapt
```

```
Practica8 — root@562176f08df8: / — com.docker.cli < docker run --name...
Last login: Wed Sep 22 08:00:15 on console
[miguel@MacBook-Pro-de-Miguel ~ % cd /Users/miguel/OneDrive\ -\ Universidad\ Ponti...
ficial\ Comillas/MIT/Arquitectura\ de\ Servicios\ de\ Red/Practica8
[miguel@MacBook-Pro-de-Miguel Practica8 % docker run --name ubuntu01 -it ubuntu ]
Unable to find image 'ubuntu:latest' locally
latest: Pulling from library/ubuntu
35807b77a593: Pull complete
Digest: sha256:9d6a8699fb5c9c39cf08a0871bd6219f0400981c570894cd8cbea30d3424a31f
Status: Downloaded newer image for ubuntu:latest
root@562176f08df8:/#
```

```
apt-get update
```



```
[30.1 kB]
Get:8 http://security.ubuntu.com/ubuntu focal-security/main amd64 Packages [1082 kB]
Get:9 http://archive.ubuntu.com/ubuntu focal/multiverse amd64 Packages [177 kB]
Get:10 http://archive.ubuntu.com/ubuntu focal/main amd64 Packages [1275 kB]
Get:11 http://archive.ubuntu.com/ubuntu focal-updates/main amd64 Packages [1537 kB]
Get:12 http://archive.ubuntu.com/ubuntu focal-updates/multiverse amd64 Packages [33.3 kB]
Get:13 http://archive.ubuntu.com/ubuntu focal-updates/universe amd64 Packages [1 071 kB]
Get:14 http://archive.ubuntu.com/ubuntu focal-updates/restricted amd64 Packages [590 kB]
Get:15 http://archive.ubuntu.com/ubuntu focal-backports/universe amd64 Packages [6310 B]
Get:16 http://archive.ubuntu.com/ubuntu focal-backports/main amd64 Packages [266 8 B]
Get:17 http://security.ubuntu.com/ubuntu focal-security/restricted amd64 Packages [529 kB]
Get:18 http://security.ubuntu.com/ubuntu focal-security/universe amd64 Packages [791 kB]
Fetched 19.1 MB in 11s (1818 kB/s)
Reading package lists... Done
root@562176f08df8:/#
```

```
Apt-get install vim
```

```
● ● ● miguel — root@5a4de5fb6b67: / — com.docker.cli ▾ docker run --name u...
doesn't exist
update-alternatives: warning: skip creation of /usr/share/man/de/man1/editor.1.gz because associated file /usr/share/man/de/man1/vim.1.gz (of link group editor) doesn't exist
update-alternatives: warning: skip creation of /usr/share/man/fr/man1/editor.1.gz because associated file /usr/share/man/fr/man1/vim.1.gz (of link group editor) doesn't exist
update-alternatives: warning: skip creation of /usr/share/man/it/man1/editor.1.gz because associated file /usr/share/man/it/man1/vim.1.gz (of link group editor) doesn't exist
update-alternatives: warning: skip creation of /usr/share/man/ja/man1/editor.1.gz because associated file /usr/share/man/ja/man1/vim.1.gz (of link group editor) doesn't exist
update-alternatives: warning: skip creation of /usr/share/man/pl/man1/editor.1.gz because associated file /usr/share/man/pl/man1/vim.1.gz (of link group editor) doesn't exist
update-alternatives: warning: skip creation of /usr/share/man/ru/man1/editor.1.gz because associated file /usr/share/man/ru/man1/vim.1.gz (of link group editor) doesn't exist
update-alternatives: warning: skip creation of /usr/share/man/man1/editor.1.gz because associated file /usr/share/man/man1/vim.1.gz (of link group editor) doesn't exist
Processing triggers for libc-bin (2.31-0ubuntu9.2) ...
root@5a4de5fb6b67:/# █
```

Vim

```
miguel — root@5a4de5fb6b67: / — com.docker.cli ▾ docker run --name u...
VIM - Vi IMproved
version 8.1.2269
by Bram Moolenaar et al.
Modified by team+vim@tracker.debian.org
Vim is open source and freely distributable

Become a registered Vim user!
type :help register<Enter> for information

type :q<Enter> to exit
type :help<Enter> or <F1> for on-line help
type :help version8<Enter> for version info
```

**Exit**

## Docker ps

Docker ps -a

```
miguel@MacBook-Pro-de-Miguel ~ % clear  
miguel@MacBook-Pro-de-Miguel ~ % docker ps  
CONTAINER ID IMAGE COMMAND CREATED STATUS PORTS NAMES  
miguel@MacBook-Pro-de-Miguel ~ % docker ps -a  
CONTAINER ID IMAGE COMMAND CREATED STATUS PORTS NAMES  
5a4de5fb6b67 ubuntu "bash" 3 minutes ago Exited (0) 24 seconds ago  
miguel@MacBook-Pro-de-Miguel ~ %
```

```
miguel@root@849d74ce33eb: / — com.docker.cli < docker run --name ubuntu02 -it ubuntu/vim...  
[miguel@MacBook-Pro-de-Miguel ~ % docker commit ubuntu01 ubuntu/vim  
sha256:b145601347c9f9210b34862d2a369fe8881e654d53b43b35e4a91bd2777d92d8  
[miguel@MacBook-Pro-de-Miguel ~ % docker images  
REPOSITORY TAG IMAGE ID CREATED SIZE  
ubuntu/vim latest b145601347c9 11 seconds ago 171MB  
ubuntu latest fb52e22af1b0 3 weeks ago 72.8MB  
[miguel@MacBook-Pro-de-Miguel ~ % docker run --name ubuntu02 -it ubuntu/vim  
root@849d74ce33eb:/#
```

```
miguel — root@849d74ce33eb: / — com.docker.cli < docker run --name ubuntu02 -it ubuntu/vim...
VIM - Vi IMproved
version 8.1.2269
by Bram Moolenaar et al.
Modified by team+vim@tracker.debian.org
Vim is open source and freely distributable

Become a registered Vim user!
type :help register<Enter> for information

type :q<Enter> to exit
type :help<Enter> or <F1> for on-line help
type :help version8<Enter> for version info
```

```
miguel — root@849d74ce33eb: / — com.docker.cli - docker run --name ubuntu02 -it ubuntu/vim...
rm: cannot remove '/sys/module/dm_bufio/parameters/retain_bytes': Read-only file system
rm: cannot remove '/sys/module/dm_bufio/parameters/peak_allocated_bytes': Read-only file system
rm: cannot remove '/sys/module/dm_bufio/parameters/allocated_get_free_pages_bytes': Read-only file system
rm: cannot remove '/sys/module/virtio_net/uevent': Read-only file system
rm: cannot remove '/sys/module/virtio_net/parameters/napi_weight': Read-only file system
rm: cannot remove '/sys/module/virtio_net/parameters/csум': Read-only file system
rm: cannot remove '/sys/module/virtio_net/parameters/napi_tx': Read-only file system
rm: cannot remove '/sys/module/virtio_net/parameters/gso': Read-only file system
rm: cannot remove '/sys/module/workqueue/uevent': Read-only file system
rm: cannot remove '/sys/module/workqueue/parameters/watchdog_thresh': Read-only file system
rm: cannot remove '/sys/module/workqueue/parameters/disable numa': Read-only file system
rm: cannot remove '/sys/module/workqueue/parameters/debug_force_rr_cpu': Read-only file system
rm: cannot remove '/sys/module/workqueue/parameters/power_efficient': Read-only file system
rm: cannot remove '/sys/module/tpm/uevent': Read-only file system
rm: cannot remove '/sys/module/tpm/parameters/suspend_pcr': Read-only file system
rm: cannot remove '/sys/module/tpm/version': Read-only file system
rm: cannot remove '/sys/module/sr_mod/uevent': Read-only file system
rm: cannot remove '/sys/module/sr_mod/parameters/xa_test': Read-only file system
rm: cannot remove '/sys/module/ip_vs_ftp/uevent': Read-only file system
rm: cannot remove '/sys/module/ip_vs_ftp/parameters/ports': Read-only file system
[root@849d74ce33eb: # ls /
bash: /usr/bin/ls: No such file or directory
root@849d74ce33eb: # ]
```

```
miguel — root@849d74ce33eb:/ — zsh — 101x24
[miguel@MacBook-Pro-de-Miguel ~ % docker stop ubuntu02
ubuntu02
[miguel@MacBook-Pro-de-Miguel ~ % docker rm ubuntu02
ubuntu02
[miguel@MacBook-Pro-de-Miguel ~ % docker rmi ubuntu/vim
Untagged: ubuntu/vim:latest
Deleted: sha256:b145601347c9f9210b34862d2a369fe8881e654d53b43b35e4a91bd2777d92d8
Deleted: sha256:1008ee68279871af20b79e826ee8f07bf0e06ddfb3294b9347a38e270229d1b9
miguel@MacBook-Pro-de-Miguel ~ % ]
```

```
miguel — root@5a4de5fb6b67:/ — com.docker.cli - docker exec -it ubuntu01 bash — 101x24
OpenSSH user/password GUI dialog for LXQt
lxqt-openssh-askpass-l10n/focal 0.14.1-1ubuntu1 all
    Language package for lxqt-openssh-askpass

openssl-client/focal-updates 1:8.2p1-4ubuntu0.3 amd64
    secure shell (SSH) client, for secure access to remote machines

openssl-client-ssh1/focal 1:7.5p1-11build1 amd64
    secure shell (SSH) client for legacy SSH1 protocol

openssl-known-hosts/focal 0.6.2-1 all
    download, filter and merge known_hosts for OpenSSH

openssl-server/focal-updates 1:8.2p1-4ubuntu0.3 amd64
    secure shell (SSH) server, for secure access from remote machines

openssl-sftp-server/focal-updates 1:8.2p1-4ubuntu0.3 amd64
    secure shell (SSH) sftp server module, for SFTP access from remote machines

openssl-tests/focal-updates 1:8.2p1-4ubuntu0.3 amd64
    OpenSSH regression tests

root@5a4de5fb6b67:/# ]
```

```
miguel — root@5a4de5fb6b67:/ — com.docker.cli - docker exec -it ubuntu01 bash — 101x24
Processing triggers for libc-bin (2.31-0ubuntu9.2) ...
Processing triggers for ca-certificates (20210119~20.04.2) ...
Updating certificates in /etc/ssl/certs...
0 added, 0 removed; done.
Running hooks in /etc/ca-certificates/update.d...
done.
[root@5a4de5fb6b67:/]# service open-ssh-server start
open-ssh-server: unrecognized service
[root@5a4de5fb6b67:/]# service openssh-server start
openssh-server: unrecognized service
[root@5a4de5fb6b67:/]# service openssh start
openssh: unrecognized service
[root@5a4de5fb6b67:/]# service list
list: unrecognized service
[root@5a4de5fb6b67:/]# service --help
Usage: service < option > | --status-all | [ service_name [ command | --full-restart ] ]
[root@5a4de5fb6b67:/]# service --status-all
[ - ] dbus
[ ? ] hwclock.sh
[ - ] procps
[ - ] ssh
[root@5a4de5fb6b67:/]# service ssh start
 * Starting OpenBSD Secure Shell server sshd
[root@5a4de5fb6b67:/]# [ OK ]
```

```
miguel — -zsh — 101x24
~ — root@5a4de5fb6b67:/ — -zsh
[miguel@MacBook-Pro-de-Miguel ~ % ssh root@localhost -p 2222
@@@@@@@oooooooooooo@oooooooooooo@oooooooooooo@oooooooooooo@oooooooooooo@oooo
@ WARNING: REMOTE HOST IDENTIFICATION HAS CHANGED! @
@@@@@@@oooooooooooo@oooooooooooo@oooooooooooo@oooooooooooo@oooooooooooo@oooo
IT IS POSSIBLE THAT SOMEONE IS DOING SOMETHING NASTY!
Someone could be eavesdropping on you right now (man-in-the-middle attack)!
It is also possible that a host key has just been changed.
The fingerprint for the ECDSA key sent by the remote host is
SHA256:2sQTIUp5Uu5KpdUn0CmNzGjFtYWriuTDG7eiuuEykXg.
Please contact your system administrator.
Add correct host key in /Users/miguel/.ssh/known_hosts to get rid of this message.
Offending ECDSA key in /Users/miguel/.ssh/known_hosts:2
Host key for [localhost]:2222 has changed and you have requested strict checking.
Host key verification failed.
miguel@MacBook-Pro-de-Miguel ~ % ]
```

```
miguel — root@5a4de5fb6b67: / — com.docker.cli • docker exec -it nginx01 bash — 101x24
...67: / — com.docker.cli • docker exec -it nginx01 bash ~ — zsh + 
2021/09/23 16:00:33 [notice] 1#1: signal 17 (SIGCHLD) received from 34
2021/09/23 16:00:33 [notice] 1#1: worker process 34 exited with code 0
2021/09/23 16:00:33 [notice] 1#1: exit
miguel@MacBook-Pro-de-Miguel ~ % docker exec -it docker-nginx bash

[echo HOLA >> /usr/share/nginx/html/index.html
Error: No such container: docker-nginx
zsh: no such file or directory: /usr/share/nginx/html/index.html
|miguel@MacBook-Pro-de-Miguel ~ % docker exec -it docker-nginx bash
Error: No such container: docker-nginx
|miguel@MacBook-Pro-de-Miguel ~ % docker exec -it nginx01 bash
Error response from daemon: Container 63412482428e3ee5f6665504caf bde935a243e6057a14a0330877ef0c66e5ca
2 is not running
|miguel@MacBook-Pro-de-Miguel ~ % docker run nginx01
Unable to find image 'nginx01:latest' locally
docker: Error response from daemon: pull access denied for nginx01, repository does not exist or may
require 'docker login': denied: requested access to the resource is denied.
See 'docker run --help'.
|miguel@MacBook-Pro-de-Miguel ~ % docker start nginx01
nginx01
|miguel@MacBook-Pro-de-Miguel ~ % docker exec -it nginx01 bash
root@63412482428e:/# echo HOLA >> /usr/share/nginx/html/index.html
root@63412482428e:/#
root@63412482428e:/# ]
```

```
shared — root@5a4de5fb6b67: / — zsh — 101x24
~/Desktop/shared — root@5a4de5fb6b67: / — zsh ~ — zsh + 
[miguel@MacBook-Pro-de-Miguel shared % docker run --name nginx02 -p 82:80 -d -v /Users/miguel/Desktop/
shared:/usr/share/nginx/html nginx
41df98fba2fa0896b0ea95a81430a8796275c7997171bb05be47775d1d203b41
miguel@MacBook-Pro-de-Miguel shared % ]
```

```

miguel — com.docker.cli ▾ docker run --name tomcat -p 83:8080 tomcat — 101x24
~/Desktop/shared — root@5a4de5fb6b67: / — -zsh ... docker run --name tomcat -p 83:8080 tomcat + 

ne argument: -Dcatalina.base=/usr/local/tomcat
23-Sep-2021 16:21:02.310 INFO [main] org.apache.catalina.startup.VersionLoggerListener.log Command li
ne argument: -Dcatalina.home=/usr/local/tomcat
23-Sep-2021 16:21:02.311 INFO [main] org.apache.catalina.startup.VersionLoggerListener.log Command li
ne argument: -Djava.io.tmpdir=/usr/local/tomcat/temp
23-Sep-2021 16:21:02.331 INFO [main] org.apache.catalina.core.AprLifecycleListener.lifecycleEvent Loa
ded Apache Tomcat Native library [1.2.31] using APR version [1.7.0].
23-Sep-2021 16:21:02.332 INFO [main] org.apache.catalina.core.AprLifecycleListener.lifecycleEvent APR
capabilities: IPv6 [true], sendfile [true], accept filters [false], random [true], UDS [true].
23-Sep-2021 16:21:02.347 INFO [main] org.apache.catalina.core.AprLifecycleListener.initializeSSL Open
SSL successfully initialized [OpenSSL 1.1.1k 25 Mar 2021]
23-Sep-2021 16:21:02.857 INFO [main] org.apache.coyote.AbstractProtocol.init Initializing ProtocolHan
dler ["http-nio-8080"]
23-Sep-2021 16:21:02.902 INFO [main] org.apache.catalina.startup.Catalina.load Server initialization
in [1037] milliseconds
23-Sep-2021 16:21:03.017 INFO [main] org.apache.catalina.core.StandardService.startInternal Starting
service [Catalina]
23-Sep-2021 16:21:03.018 INFO [main] org.apache.catalina.core.StandardEngine.startInternal Starting S
ervlet engine: [Apache Tomcat/10.0.11]
23-Sep-2021 16:21:03.036 INFO [main] org.apache.coyote.AbstractProtocol.start Starting ProtocolHandle
r ["http-nio-8080"]
23-Sep-2021 16:21:03.064 INFO [main] org.apache.catalina.startup.Catalina.start Server startup in [16
1] milliseconds

```

