

PASOS INICIALES

```
ubuntu@18.223.238.14:22 - Bitvise xterm - ubuntu@ip-172-31-14-213: ~/timescaledb-lab/data
Last login: Sat Oct 12 17:26:05 2024 from 181.63.176.32
To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.

ubuntu@ip-172-31-14-213:~$ ls
ubuntu@ip-172-31-14-213:~$ sudo apt update
Warning: The unit file, source configuration file or drop-ins of apt-news.service changed on disk. Run 'systemctl daemon-reload' to reload units.
Warning: The unit file, source configuration file or drop-ins of esm-cache.service changed on disk. Run 'systemctl daemon-reload' to reload units.
Hit:1 http://us-east-2.ec2.archive.ubuntu.com/ubuntu noble InRelease
Get:2 http://us-east-2.ec2.archive.ubuntu.com/ubuntu noble-updates InRelease [126 kB]
Hit:3 http://us-east-2.ec2.archive.ubuntu.com/ubuntu noble-backports InRelease
Get:4 http://security.ubuntu.com/ubuntu noble-security InRelease [126 kB]
Get:5 http://us-east-2.ec2.archive.ubuntu.com/ubuntu noble-updates/main amd64 Packages [542 kB]
Get:6 http://us-east-2.ec2.archive.ubuntu.com/ubuntu noble-updates/universe amd64 Packages [386 kB]
Fetched 1180 kB in 1s (1449 kB/s)
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
119 packages can be upgraded. Run 'apt list --upgradable' to see them.
ubuntu@ip-172-31-14-213:~$ for pkg in docker.io docker-doc docker-compose docker-compose-v2 podman-docker containerd runc; do sudo apt-get remove $pkg; done
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
Package 'docker.io' is not installed, so not removed
0 upgraded, 0 newly installed, 0 to remove and 119 not upgraded.
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
Package 'docker-doc' is not installed, so not removed
0 upgraded, 0 newly installed, 0 to remove and 119 not upgraded.
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
Package 'docker-compose' is not installed, so not removed
0 upgraded, 0 newly installed, 0 to remove and 119 not upgraded.
```

```
ubuntu@18.223.238.14:22 - Bitvise xterm - ubuntu@ip-172-31-14-213: ~/timescaledb-lab/data
ubuntu@ip-172-31-14-213:~$ sudo install -m 0755 -d /etc/apt/keyrings
ubuntu@ip-172-31-14-213:~$ sudo curl -fsSL https://download.docker.com/linux/ubuntu/gpg -o /etc/apt/keyrings/docker.asc
ubuntu@ip-172-31-14-213:~$ sudo chmod a+r /etc/apt/keyrings/docker.asc
ubuntu@ip-172-31-14-213:~$ echo \
> "deb [arch=$(dpkg --print-architecture) signed-by=/etc/apt/keyrings/docker.asc] https://download.docker.com/linux/ubuntu \
> $(. /etc/os-release && echo "$VERSION_CODENAME") stable" | \
> sudo apt update
Warning: The unit file, source configuration file or drop-ins of apt-news.service changed on disk. Run 'systemctl daemon-reload' to reload units.
Warning: The unit file, source configuration file or drop-ins of esm-cache.service changed on disk. Run 'systemctl daemon-reload' to reload units.
Hit:1 http://us-east-2.ec2.archive.ubuntu.com/ubuntu noble InRelease
Hit:2 http://us-east-2.ec2.archive.ubuntu.com/ubuntu noble-updates InRelease
Hit:3 http://us-east-2.ec2.archive.ubuntu.com/ubuntu noble-backports InRelease
Hit:4 http://security.ubuntu.com/ubuntu noble-security InRelease
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
119 packages can be upgraded. Run 'apt list --upgradable' to see them.
ubuntu@ip-172-31-14-213:~$ sudo apt-get install docker-ce docker-ce-cli containerd.io docker-buildx-plugin docker-compose-plugin
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
Package docker-ce is not available, but is referred to by another package.
This may mean that the package is missing, has been obsoleted, or
is only available from another source

Package docker-ce-cli is not available, but is referred to by another package.
This may mean that the package is missing, has been obsoleted, or
is only available from another source

E: Package 'docker-ce' has no installation candidate
E: Package 'docker-ce-cli' has no installation candidate
E: Unable to locate package containerd.io
E: Couldn't find any package by glob 'containerd.io'
E: Couldn't find any package by regex 'containerd.io'
E: Unable to locate package docker-buildx-plugin
E: Unable to locate package docker-compose-plugin
```

TimeScale

```
ubuntu@18.223.238.14:22 - Bitvise xterm - ubuntu@ip-172-31-14-213: ~/timescaledb-lab/data
ubuntu@ip-172-31-14-213:~$ sudo install -m 0755 -d /etc/apt/keyrings
ubuntu@ip-172-31-14-213:~$ sudo curl -fsSL https://download.docker.com/linux/ubuntu/gpg -o /etc/apt/keyrings/docker.asc
ubuntu@ip-172-31-14-213:~$ sudo chmod a+r /etc/apt/keyrings/docker.asc
ubuntu@ip-172-31-14-213:~$ echo \
> "deb [arch=$(dpkg --print-architecture) signed-by=/etc/apt/keyrings/docker.asc] https://download.docker.com/linux/ubuntu \
> $(. /etc/os-release && echo "$VERSION_CODENAME") stable" | \
> sudo tee /etc/apt/sources.list.d/docker.list > /dev/null
ubuntu@ip-172-31-14-213:~$ sudo apt update
Warning: The unit file, source configuration file or drop-ins of apt-news.service changed on disk. Run 'systemctl daemon-reload' to reload units.
Warning: The unit file, source configuration file or drop-ins of esm-cache.service changed on disk. Run 'systemctl daemon-reload' to reload units.
Hit:1 http://us-east-2.ec2.archive.ubuntu.com/ubuntu noble InRelease
Hit:2 http://us-east-2.ec2.archive.ubuntu.com/ubuntu noble-updates InRelease
Hit:3 http://us-east-2.ec2.archive.ubuntu.com/ubuntu noble-backports InRelease
Get:4 https://download.docker.com/linux/ubuntu noble InRelease [48.8 kB]
Hit:5 http://security.ubuntu.com/ubuntu noble-security InRelease
Get:6 https://download.docker.com/linux/ubuntu noble/stable amd64 Packages [15.3 kB]
Fetched 64.2 kB in 1s (84.5 kB/s)
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
119 packages can be upgraded. Run 'apt list --upgradable' to see them.
ubuntu@ip-172-31-14-213:~$ sudo apt-get install docker-ce docker-ce-cli containerd.io docker-buildx-plugin docker-compose-plugin
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
  docker-ce-rootless-extras libltdl7 libslirp0 pigz slirp4netns
Suggested packages:
  aufs-tools cgroupfs-mount | cgroup-lite
The following NEW packages will be installed:
  containerd.io docker-buildx-plugin docker-ce docker-ce-cli docker-ce-rootless-extras docker-compose-plugin libltdl7 libslirp0 pigz slirp4netns
0 upgraded, 10 newly installed, 0 to remove and 119 not upgraded.
Need to get 123 MB of archives.
After this operation, 442 MB of additional disk space will be used.
Do you want to continue? [Y/n] y
Get:1 http://us-east-2.ec2.archive.ubuntu.com/ubuntu noble/universe amd64 pigz amd64 2.8-1 [65.6 kB]
```

```
ubuntu@18.223.238.14:22 - Bitvise xterm - ubuntu@ip-172-31-14-213: ~/timescaledb-lab/data
Scanning candidates...
Scanning linux images...

Pending kernel upgrade!
Running kernel version:
  6.8.0-1009-aws
Diagnostics:
  The currently running kernel version is not the expected kernel version 6.8.0-1016-aws.

Restarting the system to load the new kernel will not be handled automatically, so you should consider rebooting.

Restarting services...

Service restarts being deferred:
/etc/needrestart/restart.d/dbus.service
systemctl restart getty@tty1.service
systemctl restart networkd-dispatcher.service
systemctl restart serial-getty@ttyS0.service
systemctl restart systemd-logind.service
systemctl restart unattended-upgrades.service

No containers need to be restarted.

No user sessions are running outdated binaries.

No VM guests are running outdated hypervisor (qemu) binaries on this host.
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ubuntu@18.223.238.14:22 - Bitvise xterm - ubuntu@ip-172-31-14-213: ~/timescaledb-lab/data
ubuntu@ip-172-31-14-213:~$ sudo usermod -aG docker ubuntu
ubuntu@ip-172-31-14-213:~$ docker version
Client: Docker Engine - Community
Version: 27.3.1
API version: 1.47
Go version: go1.22.7
Git commit: ce12230
Built: Fri Sep 20 11:40:59 2024
OS/Arch: linux/amd64
Context: default
permission denied while trying to connect to the Docker daemon socket at unix:///var/run/docker.sock: Get "http://%2Fvar%2Frun%2Fdocker.sock/v1.47/version": dial unix /var/run/docker.sock: connect: permission denied
ubuntu@ip-172-31-14-213:~$ sudo service docker start
ubuntu@ip-172-31-14-213:~$ sudo chmod 666 /var/run/docker.sock
ubuntu@ip-172-31-14-213:~$ docker run hello-world
Unable to find image 'hello-world:latest' locally
latest: Pulling from library/hello-world
c1ec31eb5944: Pull complete
Digest: sha256:d211f485f2dd1dee407a80973c8f129f00d54604d2c90732e8e320e5038a0348
Status: Downloaded newer image for hello-world:latest

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

```

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effective_io_concurrency = 256
Is this okay? [(y)es/(s)kip/(q)uit]: y
Success: miscellaneous settings will be updated
Saving changes to: /etc/postgresql/16/main/postgresql.conf
ubuntu@ip-172-31-14-213:~$ cd
ubuntu@ip-172-31-14-213:~$ mkdir timescaledb-lab
ubuntu@ip-172-31-14-213:~$ mkdir timescaledb-lab
mkdir: cannot create directory 'timescaledb-lab': File exists
ubuntu@ip-172-31-14-213:~$ cd timescaledb-lab
ubuntu@ip-172-31-14-213:~/timescaledb-lab$ nano docker-compose.yml
ubuntu@ip-172-31-14-213:~/timescaledb-lab$ mkdir -p ./data
ubuntu@ip-172-31-14-213:~/timescaledb-lab$ docker-compose up -d
Command 'docker-compose' not found, but can be installed with:
sudo snap install docker # version 24.0.5, or
sudo apt install docker-compose # version 1.29.2-6
See 'snap info docker' for additional versions.
ubuntu@ip-172-31-14-213:~/timescaledb-lab$ ls
data  docker-compose.yml
ubuntu@ip-172-31-14-213:~/timescaledb-lab$ cd data/
ubuntu@ip-172-31-14-213:~/timescaledb-lab/data$ docker-compose up -d
Command 'docker-compose' not found, but can be installed with:
sudo snap install docker # version 24.0.5, or
sudo apt install docker-compose # version 1.29.2-6
See 'snap info docker' for additional versions.
ubuntu@ip-172-31-14-213:~/timescaledb-lab/data$ ls
ubuntu@ip-172-31-14-213:~/timescaledb-lab/data$ nano docker-compose.yml
ubuntu@ip-172-31-14-213:~/timescaledb-lab/data$ docker-compose up -d
Command 'docker-compose' not found, but can be installed with:
sudo snap install docker # version 24.0.5, or
sudo apt install docker-compose # version 1.29.2-6
See 'snap info docker' for additional versions.
ubuntu@ip-172-31-14-213:~/timescaledb-lab/data$ docker ps
CONTAINER ID   IMAGE      COMMAND                  CREATED   STATUS    PORTS   NAMES
ubuntu@ip-172-31-14-213:~/timescaledb-lab/data$ sudo -u postgres psql
psql (16.4 (Ubuntu 16.4-1.pgdg24.04+2))
Type "help" for help.

```

Base de datos

ubuntu@18.223.238.14:22 - Bitwise xterm - ubuntu@ip-172-31-14-213: ~/timescaledb-lab/data

```
postgres=# \password postgres
Enter new password for user "postgres":
Enter it again:
postgres=# \q
ubuntu@ip-172-31-14-213:~/timescaledb-lab/data$ psql -d "postgres://postgres:a1b2c3d4@localhost:5432/postgres"
psql (16.4 (Ubuntu 16.4-1.pgdg24.04+2))
SSL connection (protocol: TLSv1.3, cipher: TLS_AES_256_GCM_SHA384, compression: off)
Type "help" for help.

postgres=# CREATE EXTENSION IF NOT EXISTS timescaledb;
CREATE EXTENSION
postgres=# \dx

              List of installed extensions
  Name      | Version | Schema | Description
-----+-----+-----+-----
plpgsql    | 1.0     | pg_catalog | PL/pgSQL procedural language
timescaledb | 2.17.0  | public  | Enables scalable inserts and complex queries for time-series data (Community Edition)
(2 rows)

postgres=# CREATE USER iot_data_user WITH PASSWORD 'a1b2c3d4';
CREATE ROLE
postgres=# CREATE DATABASE iot_data OWNER iot_data_user;
CREATE DATABASE
postgres=# GRANT ALL PRIVILEGES ON DATABASE iot_data TO iot_data_user;
GRANT
```

```
postgres=# \l

              List of databases
  Name      | Owner      | Encoding | Locale Provider | Collate | Ctype | ICU Locale | ICU Rules | Access privileges
-----+-----+-----+-----+-----+-----+-----+-----+-----
iot_data    | iot_data_user | UTF8     | libc            | C.UTF-8 | C.UTF-8 |             |             | =Tc/iot_data_user +
            |              |          |                 |         |         |             |             | iot_data_user=CTc/iot_data_user
postgres    | postgres     | UTF8     | libc            | C.UTF-8 | C.UTF-8 |             |             |
template0   | postgres     | UTF8     | libc            | C.UTF-8 | C.UTF-8 |             |             | =c/postgres +
            |              |          |                 |         |         |             |             | postgres=CTc/postgres
template1   | postgres     | UTF8     | libc            | C.UTF-8 | C.UTF-8 |             |             | =c/postgres +
            |              |          |                 |         |         |             |             | postgres=CTc/postgres
(4 rows)

postgres=#
```


