INSTALACIÓN DE UN SISTEMA GBD

REALIZADO POR:

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JOSÉ MIGUEL ESCRIBANO RUIZ

ALUMNOS 2º ASIR

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S.O. y SGBD escogidos

Motivos de la elección

- Novedad
- Aprendizaje

Requisitos del Hardware

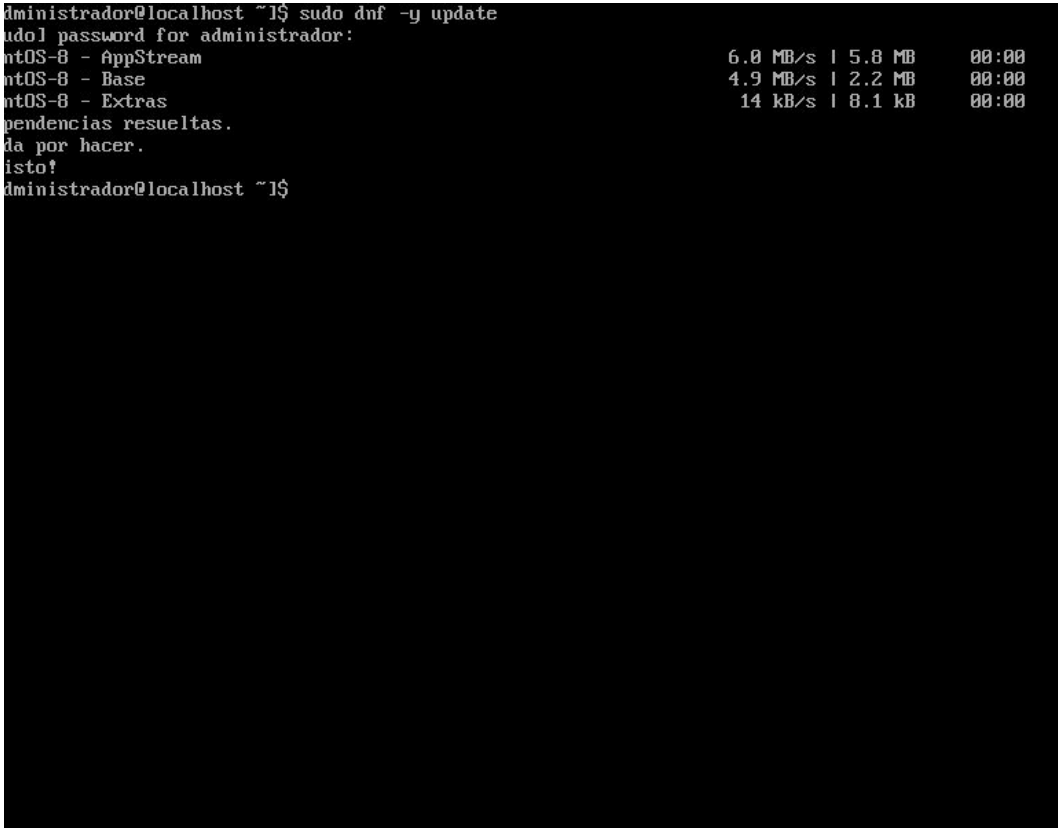
	Cantidad mínima	Cantidad usada
Memoria RAM	512 MB	1GB
Disco duro	1GB	10GB

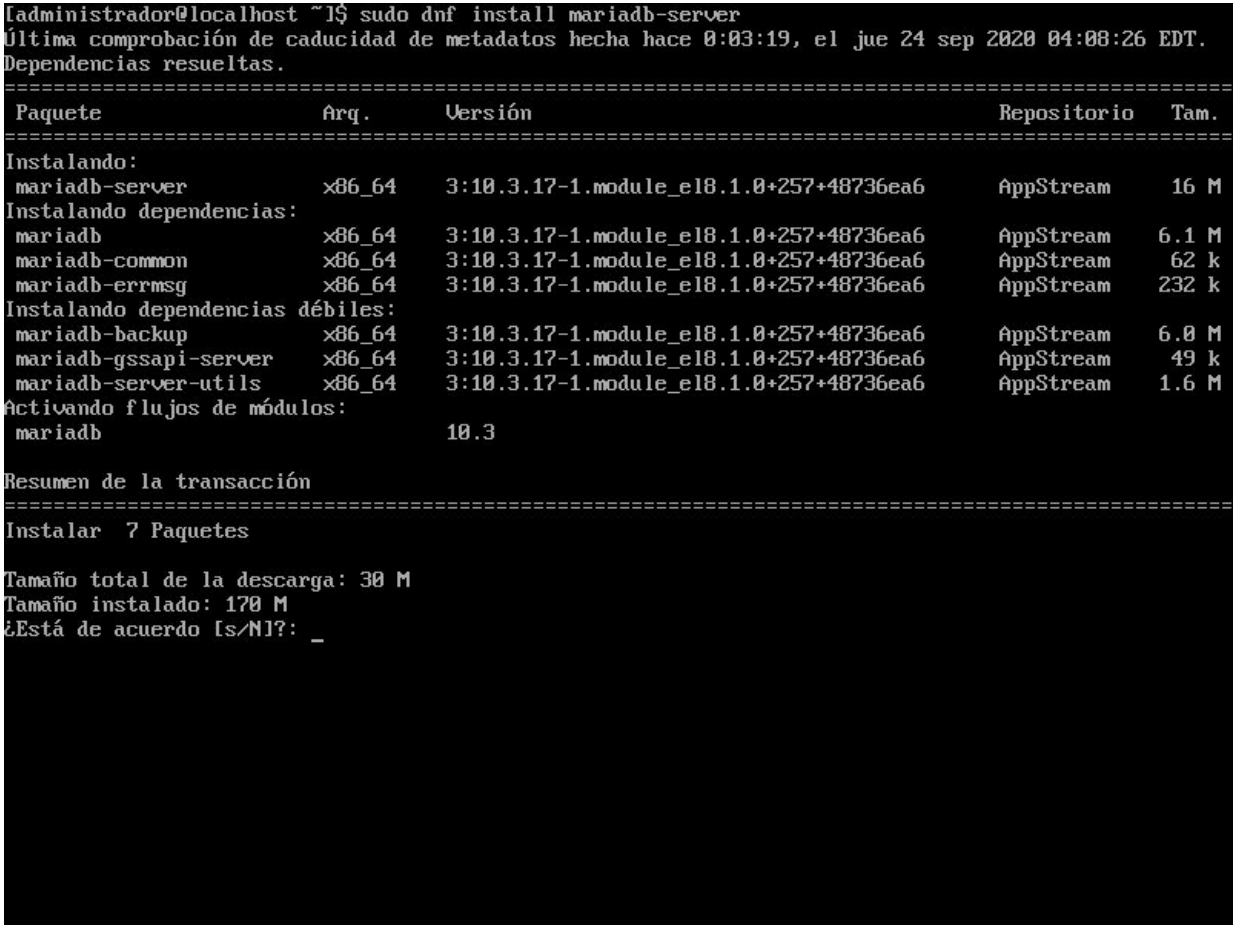
- Arquitectura 32/64 bits
- Protocolo TCP/IP

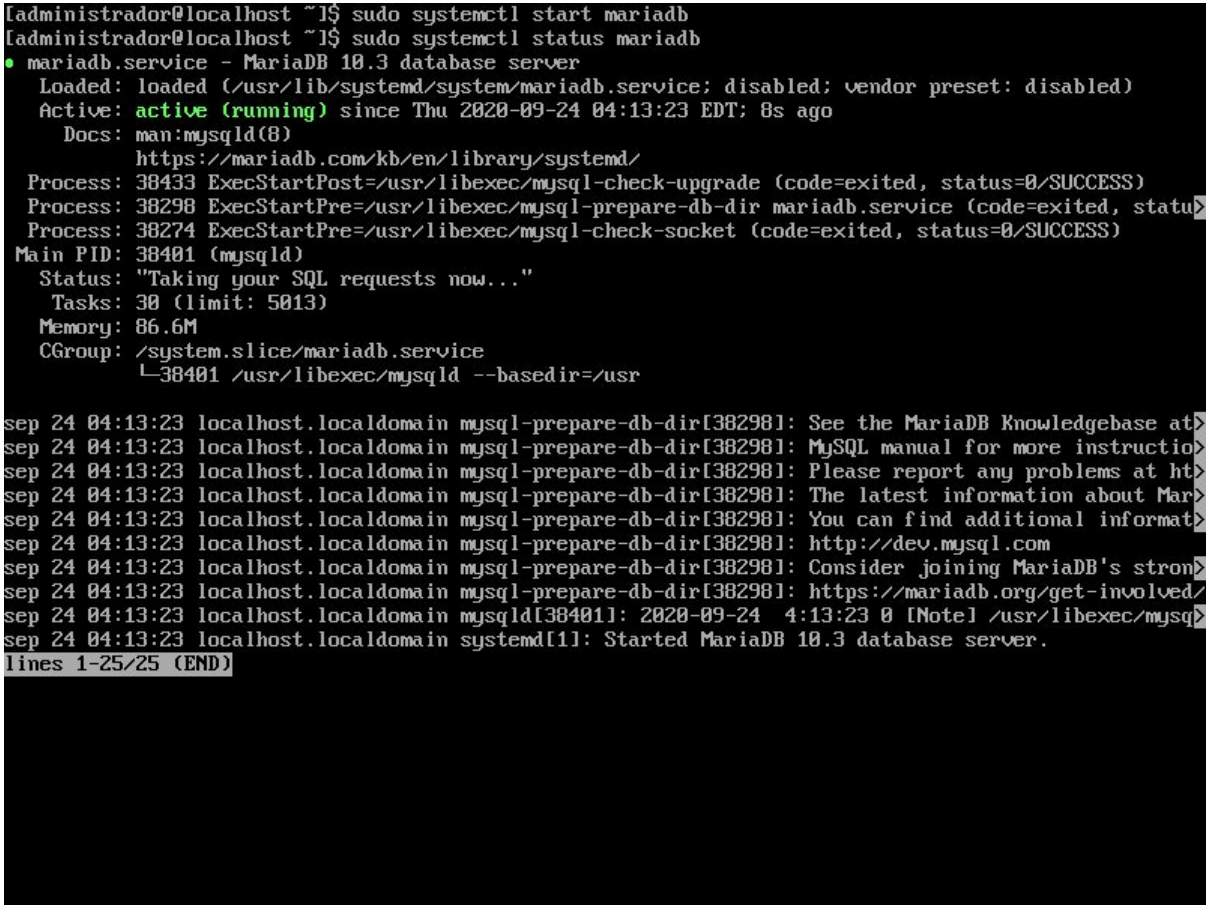
Requisitos del software

mariadb	mariadb-common
mariadb-errmsg	mariadb-backup
mariadb-gssapi-server	mariadb-server-utils

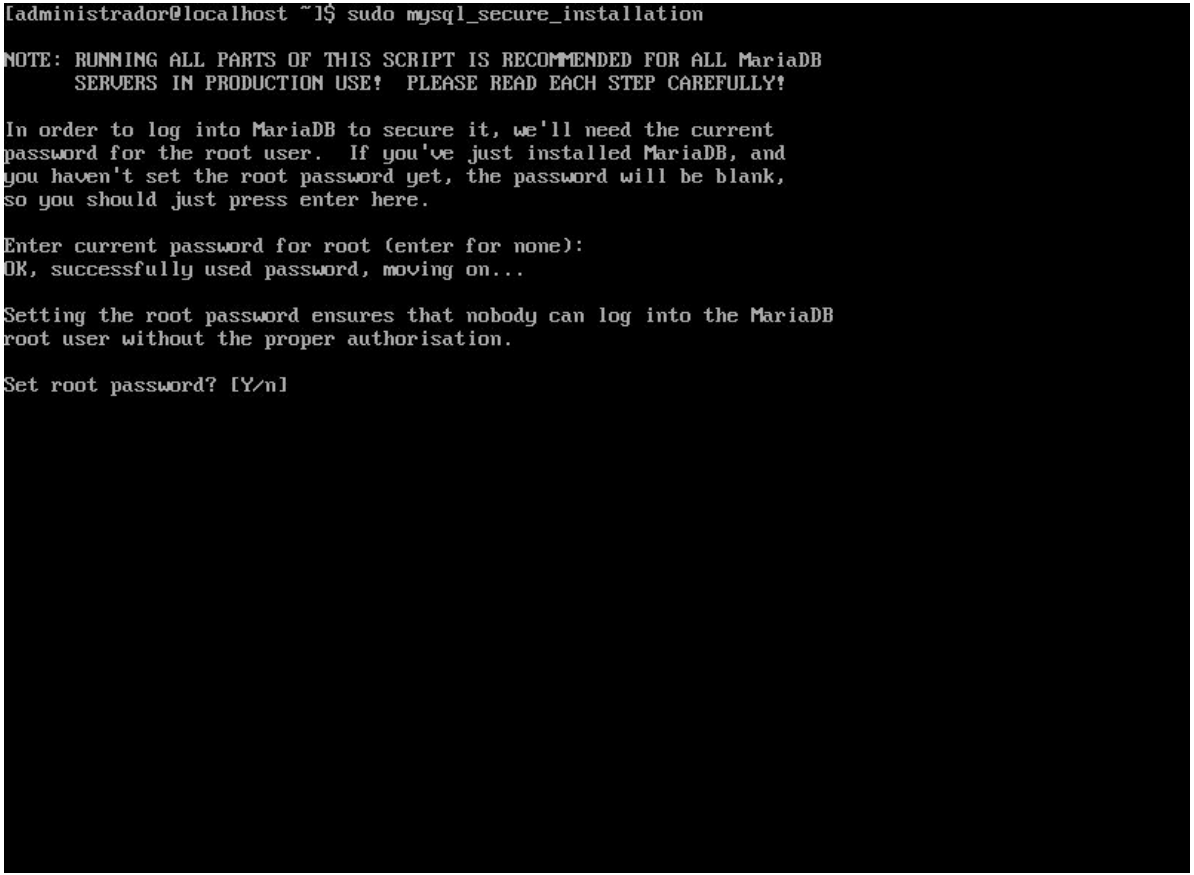
Instalación del SGBD

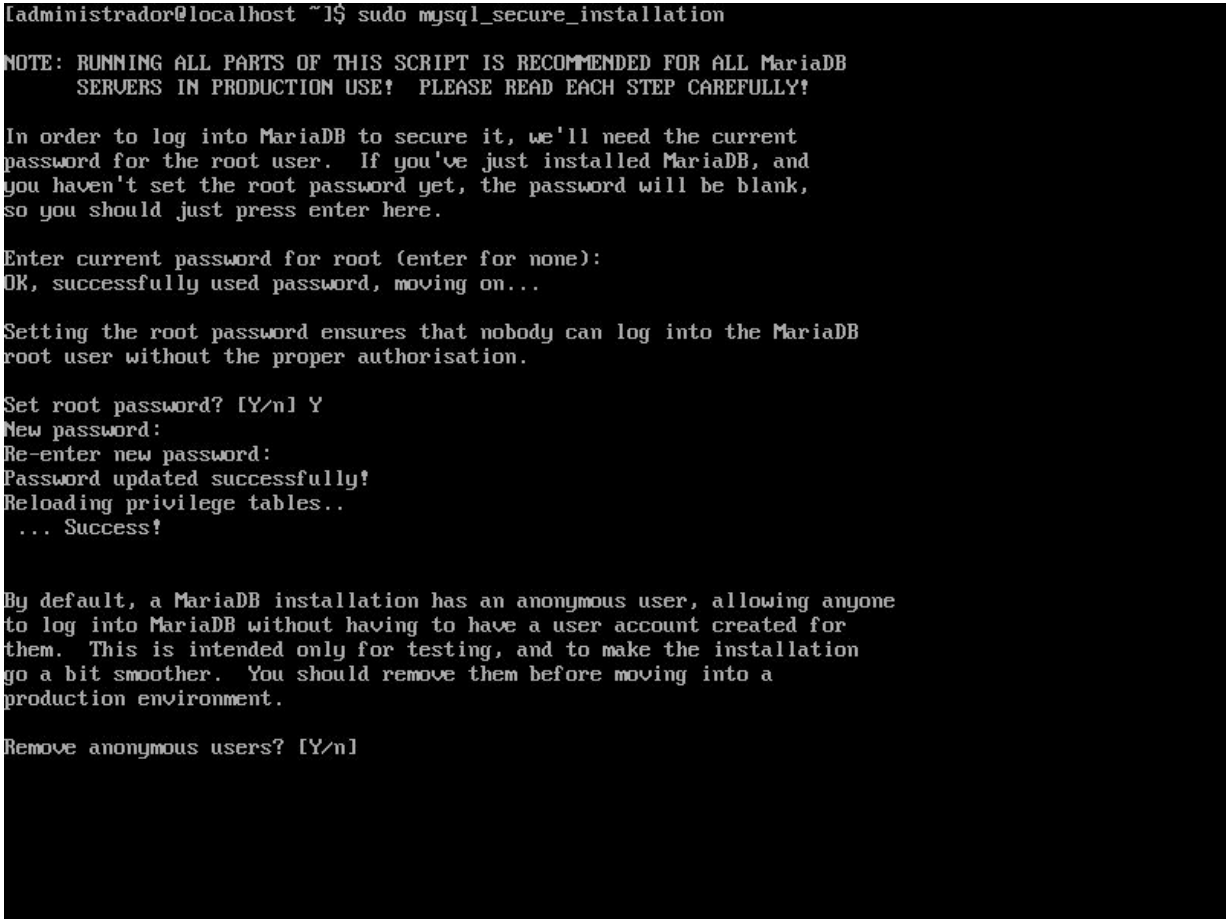



[administrador@localhost ~]$ sudo dnf install mariadb-server
Última comprobación de caducidad de metadatos hecha hace 0:03:19, el jue 24 sep 2020 04:08:26 EDT.
Dependencias resueltas.
Paquete Arq. Versión Repositorio Tam.
Instalando:
mariadb-server x86_64 3:10.3.17-1.module_el8.1.0+257+48736ea6 AppStream 16 M
Instalando dependencias:
mariadb x86_64 3:10.3.17-1.module_el8.1.0+257+48736ea6 AppStream 6.1 M
mariadb-common x86_64 3:10.3.17-1.module_el8.1.0+257+48736ea6 AppStream 62 k
mariadb-errmsg x86_64 3:10.3.17-1.module_el8.1.0+257+48736ea6 AppStream 232 k
Instalando dependencias débiles:
mariadb-backup x86_64 3:10.3.17-1.module_el8.1.0+257+48736ea6 AppStream 6.0 M
mariadb-gssapi-server x86_64 3:10.3.17-1.module_el8.1.0+257+48736ea6 AppStream 49 k
mariadb-server-utils x86_64 3:10.3.17-1.module_el8.1.0+257+48736ea6 AppStream 1.6 M
Activando flujos de módulos:
mariadb 10.3
Resumen de la transacción
Instalar 7 Paquetes
Tamaño total de la descarga: 30 M
Tamaño instalado: 170 M
¿Está de acuerdo [s/N]?: _


[administrador@localhost ~]$ sudo systemctl start mariadb
[administrador@localhost ~]$ sudo systemctl status mariadb
● mariadb.service - MariaDB 10.3 database server
Loaded: loaded (/usr/lib/systemd/system/mariadb.service; disabled; vendor preset: disabled)
Active: active (running) since Thu 2020-09-24 04:13:23 EDT; 8s ago
Docs: man:mysqld(8)
https://mariadb.com/kb/en/library/systemd/
Process: 38433 ExecStartPost=/usr/libexec/mysql-check-upgrade (code=exited, status=0/SUCCESS)
Process: 38298 ExecStartPre=/usr/libexec/mysql-prepare-db-dir mariadb.service (code=exited, statu
Process: 38274 ExecStartPre=/usr/libexec/mysql-check-socket (code=exited, status=0/SUCCESS)
Main PID: 38401 (mysqld)
Status: "Taking your SQL requests now..."
Tasks: 30 (limit: 5013)
Memory: 86.6M
CGroup: /system.slice/mariadb.service
└─38401 /usr/libexec/mysqld --basedir=/usr
sep 24 04:13:23 localhost.localdomain mysql-prepare-db-dir[38298]: See the MariaDB Knowledgebase at
sep 24 04:13:23 localhost.localdomain mysql-prepare-db-dir[38298]: MySQL manual for more instructio
sep 24 04:13:23 localhost.localdomain mysql-prepare-db-dir[38298]: Please report any problems at ht
sep 24 04:13:23 localhost.localdomain mysql-prepare-db-dir[38298]: The latest information about Mar
sep 24 04:13:23 localhost.localdomain mysql-prepare-db-dir[38298]: You can find additional informat
sep 24 04:13:23 localhost.localdomain mysql-prepare-db-dir[38298]: http://dev.mysql.com
sep 24 04:13:23 localhost.localdomain mysql-prepare-db-dir[38298]: Consider joining MariaDB's stron
sep 24 04:13:23 localhost.localdomain mysql-prepare-db-dir[38298]: https://mariadb.org/get-involved/
sep 24 04:13:23 localhost.localdomain mysqld[38401]: 2020-09-24 4:13:23 0 [Note] /usr/libexec/mysq
sep 24 04:13:23 localhost.localdomain systemd[1]: Started MariaDB 10.3 database server.
lines 1-25/25 (END)


[administrador@localhost ~]$ sudo systemctl enable mariadb
Created symlink /etc/systemd/system/mysql.service → /usr/lib/systemd/system/mariadb.service.
Created symlink /etc/systemd/system/mysqld.service → /usr/lib/systemd/system/mariadb.service.
Created symlink /etc/systemd/system/multi-user.target.wants/mariadb.service → /usr/lib/systemd/system/mariadb.service.
[administrador@localhost ~]$ _


[administrador@localhost ~]$ sudo mysql_secure_installation
NOTE: RUNNING ALL PARTS OF THIS SCRIPT IS RECOMMENDED FOR ALL MariaDB
SERVERS IN PRODUCTION USE! PLEASE READ EACH STEP CAREFULLY!
In order to log into MariaDB to secure it, we'll need the current
password for the root user. If you've just installed MariaDB, and
you haven't set the root password yet, the password will be blank,
so you should just press enter here.
Enter current password for root (enter for none):
OK, successfully used password, moving on...
Setting the root password ensures that nobody can log into the MariaDB
root user without the proper authorisation.
Set root password? [Y/n]


[administrador@localhost ~]$ sudo mysql_secure_installation
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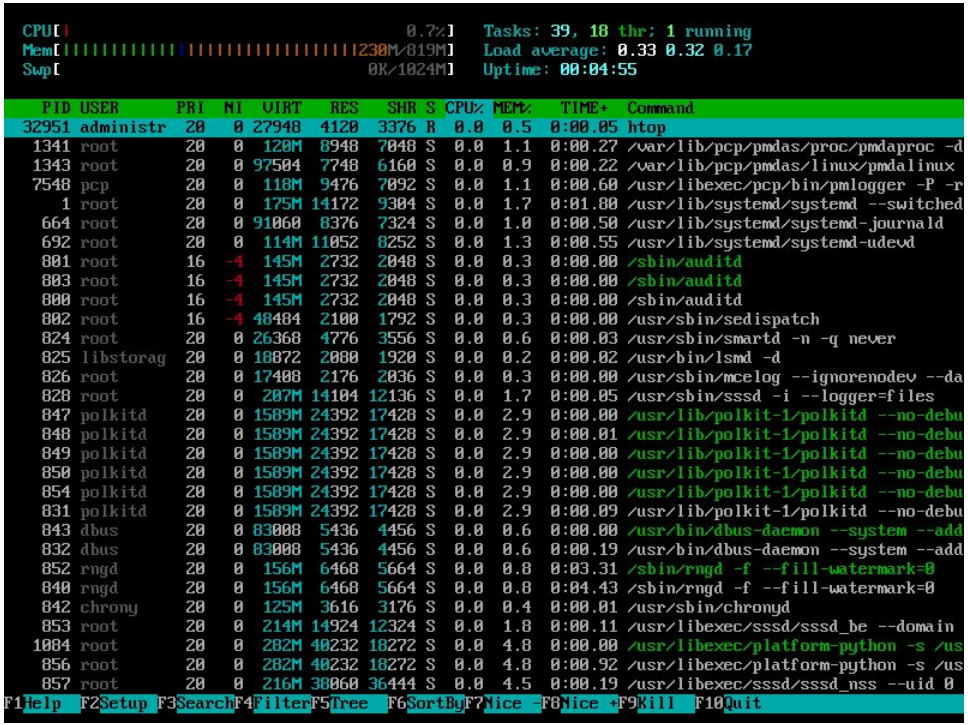
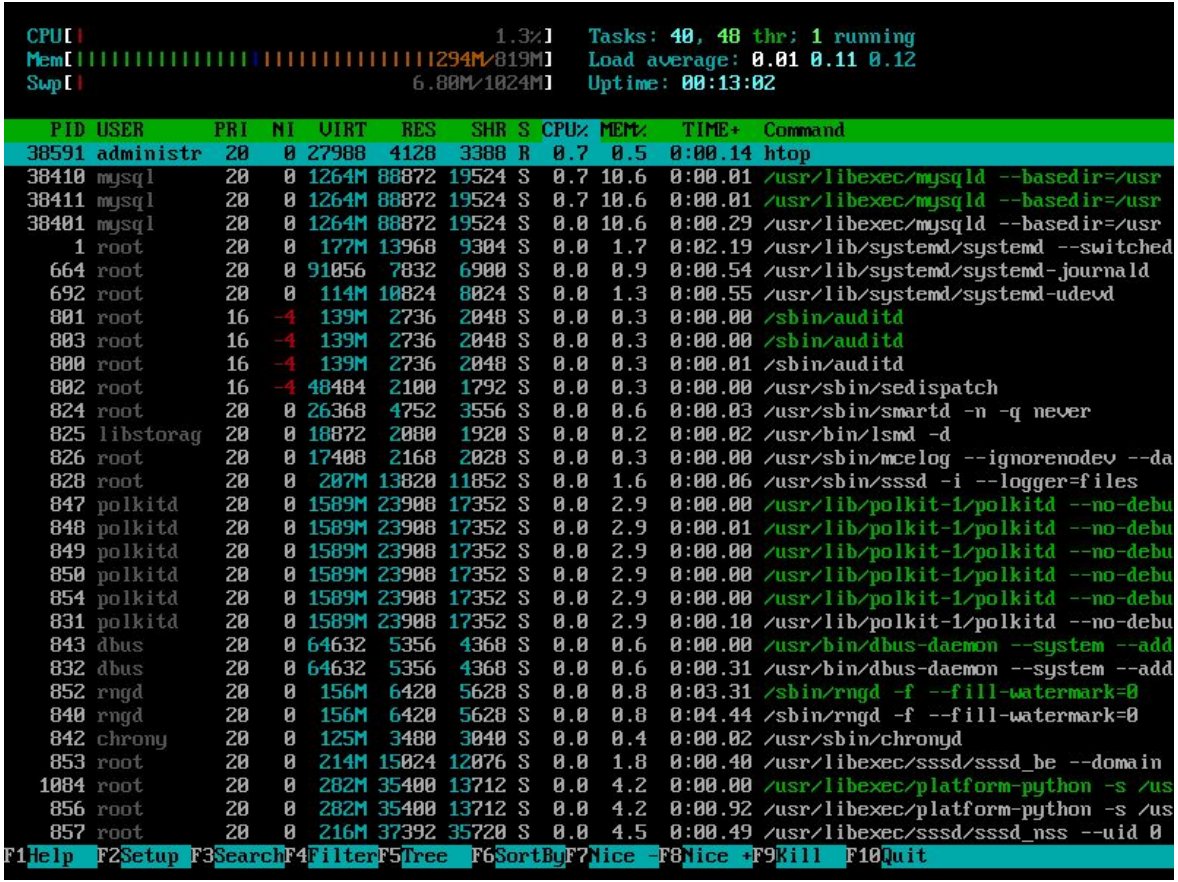
In order to log into MariaDB to secure it, we'll need the current
password for the root user. If you've just installed MariaDB, and
you haven't set the root password yet, the password will be blank,
so you should just press enter here.
Enter current password for root (enter for none):
OK, successfully used password, moving on...
Setting the root password ensures that nobody can log into the MariaDB
root user without the proper authorisation.
Set root password? [Y/n] Y
New password:
Re-enter new password:
Password updated successfully!
Reloading privilege tables..
... Success!
By default, a MariaDB installation has an anonymous user, allowing anyone
to log into MariaDB without having to have a user account created for
them. This is intended only for testing, and to make the installation
go a bit smoother. You should remove them before moving into a
production environment.
Remove anonymous users? [Y/n]

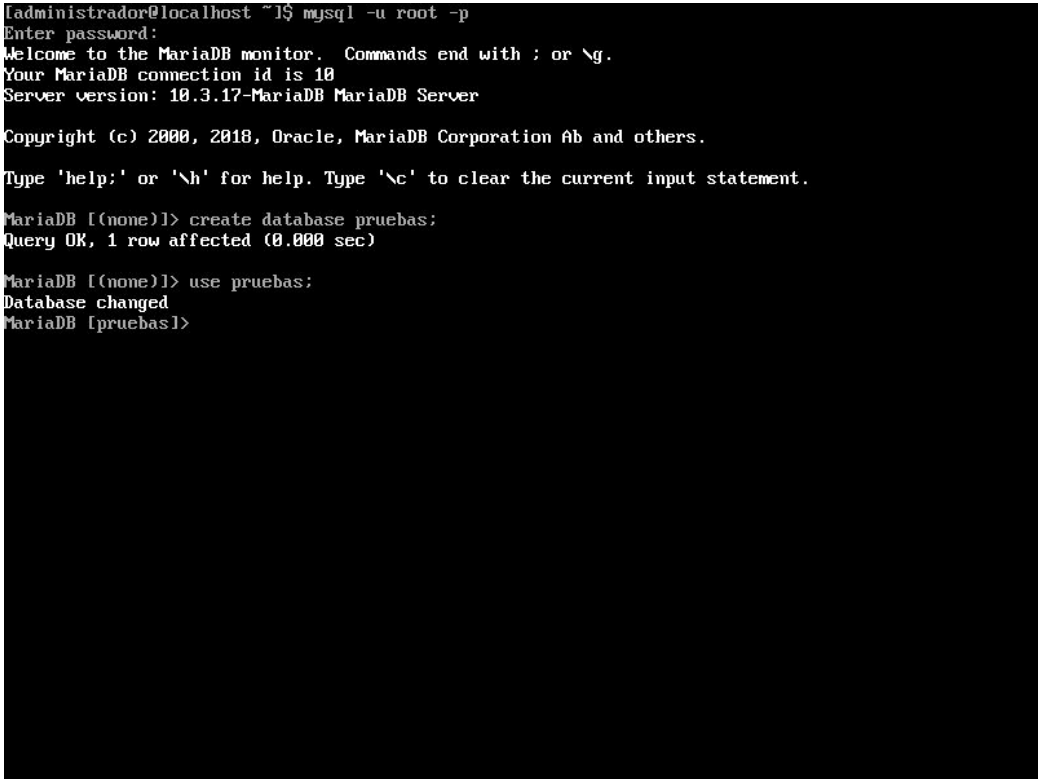
```
to log into MariaDB without having to have a user account created for
them.  This is intended only for testing, and to make the installation
go a bit smoother.  You should remove them before moving into a
production environment.

Remove anonymous users? [Y/n] Y
 ... Success!

Normally, root should only be allowed to connect from 'localhost'.  This
ensures that someone cannot guess at the root password from the network.

Disallow root login remotely? [Y/n] Y
 ... Success!

By default, MariaDB comes with a database named 'test' that anyone can
access.  This is also intended only for testing, and should be removed
before moving into a production environment.

Remove test database and access to it? [Y/n] Y
 - Dropping test database...
 ... Success!
 - Removing privileges on test database...
 ... Success!

Reloading the privilege tables will ensure that all changes made so far
will take effect immediately.

Reload privilege tables now? [Y/n] Y
 ... Success!

Cleaning up...

All done!  If you've completed all of the above steps, your MariaDB
installation should now be secure.

Thanks for using MariaDB!
[administrador@localhost ~]$
```

Monitorización




CPU[1.3%] Tasks: 40, 48 thr; 1 running
Mem[294M/819M] Load average: 0.01 0.11 0.12
Swp[6.80M/1024M] Uptime: 00:13:02
PID USER PRI NI VIRT RES SHR S CPU% MEM% TIME+ Command
38591 administr 20 0 27988 4128 3388 R 0.7 0.5 0:00.14 htop
38410 mysql 20 0 1264M 88872 19524 S 0.7 10.6 0:00.01 /usr/libexec/mysqld --basedir=/usr
38411 mysql 20 0 1264M 88872 19524 S 0.7 10.6 0:00.01 /usr/libexec/mysqld --basedir=/usr
38401 mysql 20 0 1264M 88872 19524 S 0.0 10.6 0:00.29 /usr/libexec/mysqld --basedir=/usr
1 root 20 0 177M 13968 9304 S 0.0 1.7 0:02.19 /usr/lib/systemd/systemd --switched
664 root 20 0 91056 7832 6900 S 0.0 0.9 0:00.54 /usr/lib/systemd/systemd-journald
692 root 20 0 114M 10824 8024 S 0.0 1.3 0:00.55 /usr/lib/systemd/systemd-udevd
801 root 16 -4 139M 2736 2048 S 0.0 0.3 0:00.00 /sbin/auditd
803 root 16 -4 139M 2736 2048 S 0.0 0.3 0:00.00 /sbin/auditd
800 root 16 -4 139M 2736 2048 S 0.0 0.3 0:00.01 /sbin/auditd
802 root 16 -4 48484 2100 1792 S 0.0 0.3 0:00.00 /usr/sbin/sedispatch
824 root 20 0 26368 4752 3556 S 0.0 0.6 0:00.03 /usr/sbin/smartd -n -q never
825 libstorag 20 0 18872 2080 1920 S 0.0 0.2 0:00.02 /usr/bin/lsmd -d
826 root 20 0 17408 2168 2028 S 0.0 0.3 0:00.00 /usr/sbin/mcelog --ignorenodev --da
828 root 20 0 207M 13820 11852 S 0.0 1.6 0:00.06 /usr/sbin/sssd -i --logger=files
847 polkitd 20 0 1589M 23908 17352 S 0.0 2.9 0:00.00 /usr/lib/polkit-1/polkitd --no-debu
848 polkitd 20 0 1589M 23908 17352 S 0.0 2.9 0:00.01 /usr/lib/polkit-1/polkitd --no-debu
849 polkitd 20 0 1589M 23908 17352 S 0.0 2.9 0:00.00 /usr/lib/polkit-1/polkitd --no-debu
850 polkitd 20 0 1589M 23908 17352 S 0.0 2.9 0:00.00 /usr/lib/polkit-1/polkitd --no-debu
854 polkitd 20 0 1589M 23908 17352 S 0.0 2.9 0:00.00 /usr/lib/polkit-1/polkitd --no-debu
831 polkitd 20 0 1589M 23908 17352 S 0.0 2.9 0:00.10 /usr/lib/polkit-1/polkitd --no-debu
843 dbus 20 0 64632 5356 4368 S 0.0 0.6 0:00.00 /usr/bin/dbus-daemon --system --add
832 dbus 20 0 64632 5356 4368 S 0.0 0.6 0:00.31 /usr/bin/dbus-daemon --system --add
852 rngd 20 0 156M 6420 5628 S 0.0 0.8 0:03.31 /sbin/rngd -f --fill-watermark=0
840 rngd 20 0 156M 6420 5628 S 0.0 0.8 0:04.44 /sbin/rngd -f --fill-watermark=0
842 chrony 20 0 125M 3480 3040 S 0.0 0.4 0:00.02 /usr/sbin/chronyd
853 root 20 0 214M 15024 12076 S 0.0 1.8 0:00.40 /usr/libexec/sssd/sssd_be --domain
1084 root 20 0 282M 35400 13712 S 0.0 4.2 0:00.00 /usr/libexec/platform-python -s /us
856 root 20 0 282M 35400 13712 S 0.0 4.2 0:00.92 /usr/libexec/platform-python -s /us
857 root 20 0 216M 37392 35720 S 0.0 4.5 0:00.49 /usr/libexec/sssd/sssd_nss --uid 0
F1Help F2Setup F3SearchF4FilterF5Tree F6SortByF7Nice -F8Nice +F9Kill F10Quit

Consultas


[administrador@localhost ~]$ mysql -u root -p
Enter password:
Welcome to the MariaDB monitor. Commands end with ; or \g.
Your MariaDB connection id is 10
Server version: 10.3.17-MariaDB MariaDB Server
Copyright (c) 2000, 2018, Oracle, MariaDB Corporation Ab and others.
Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.
MariaDB [(none)]> create database pruebas;
Query OK, 1 row affected (0.000 sec)
MariaDB [(none)]> use pruebas;
Database changed
MariaDB [pruebas]>

```
MariaDB [pruebas]> create table coches ( matricula VARCHAR(7) PRIMARY KEY, marca VARCHAR(30), modelo
 VARCHAR(30) );
Query OK, 0 rows affected (0.035 sec)

MariaDB [pruebas]> insert into coches values ( '1111ABC', 'Opel', 'Corsa');
Query OK, 1 row affected (0.001 sec)

MariaDB [pruebas]> insert into coches values ( '2222DEF', 'Renault', 'Clio');
Query OK, 1 row affected (0.002 sec)

MariaDB [pruebas]> insert into coches values ( '3333GHI', 'Mazda', 'CX3');
Query OK, 1 row affected (0.001 sec)

MariaDB [pruebas]> update coches set modelo = 'MX5' where matricula = '3333GHI';
Query OK, 1 row affected (0.041 sec)
Rows matched: 1  Changed: 1  Warnings: 0

MariaDB [pruebas]> delete from coches where matricula = '1111ABC';
Query OK, 1 row affected (0.002 sec)

MariaDB [pruebas]> select * from coches;
+-----------+---------+--------+
| matricula | marca   | modelo |
+-----------+---------+--------+
| 2222DEF   | Renault | Clio   |
| 3333GHI   | Mazda   | MX5    |
+-----------+---------+--------+
2 rows in set (0.000 sec)

MariaDB [pruebas]> _
```

```
MariaDB [pruebas]> select count(matricula) from coches;
+------------------+
| count(matricula) |
+------------------+
|                2 |
+------------------+
1 row in set (0.000 sec)

MariaDB [pruebas]> select count(matricula) from coches where marca = 'Renault';
+------------------+
| count(matricula) |
+------------------+
|                1 |
+------------------+
1 row in set (0.000 sec)

MariaDB [pruebas]> select * from coches where marca LIKE '%zd%';
+-----------+-------+--------+
| matricula | marca | modelo |
+-----------+-------+--------+
| 3333GHI   | Mazda | MX5    |
+-----------+-------+--------+
1 row in set (0.000 sec)

MariaDB [pruebas]> _
```

Bibliografía

- https://mariadb.com/kb/es/basic-sql-statements/
- https://www.google.com/search?rlz=1C1CHBF_esES879ES879&q=requisitos+hardware+para+instalar+mariadb&spell
- https://wiki.centos.org/Documentation

¿Preguntas?