archlinux postgres installation

Contents

1 Introduction

In this document we are going through all the steps I historically needed to install postgres on ArchLinux.

2 Installation

2.1 package installation

$$sudo \quad pacman - S \quad postgresql$$

```
resolving dependencies...
looking for conflicting packages...
Packages (2) postgresql-libs-13.4-6 postgresql-13.4-6
Total Download Size: 18.36 MiB
Total Installed Size: 59.23 MiB
:: Proceed with installation? [Y/n]
```

2.2 changing postgres password

$$sudo \quad passwd \quad postgres$$

then change the password

$$sudo \quad -iu \quad postgres$$

$$psql$$

```
psql: error: could not connect to server: No such file or directory
Is the server running locally and accepting
connections on Unix domain socket "/run/postgresql/.s.PGSQL.5432"?
```

2.3 initialize the database cluster

let us initialize the database cluster by issuing this command

$$initdb \quad -D \quad /var/lib/postgres/data$$

```
[postgres@daniele-virtualbox ~]$ initdb -D /var/lib/postgres/data
The files belonging to this database system will be owned by user
    "postgres".
This user must also own the server process.
The database cluster will be initialized with locales
COLLATE: en_GB.utf8
CTYPE:   en_GB.utf8
MESSAGES: en_GB.utf8
MONETARY: en_GB.UTF-8
NUMERIC: en_GB.UTF-8
TIME:    en_GB.UTF-8
The default database encoding has accordingly been set to "UTF8".
The default text search configuration will be set to "english".
Data page checksums are disabled.
fixing permissions on existing directory /var/lib/postgres/data
    ... ok
creating subdirectories ... ok
selecting dynamic shared memory implementation ... posix
selecting default max_connections ... 100
selecting default shared_buffers ... 128MB
selecting default time zone ... Europe/London
creating configuration files ... ok
running bootstrap script ... ok
performing post-bootstrap initialization ... ok
```

```
syncing data to disk ... ok
initdb: warning: enabling "trust" authentication for local
    connections
You can change this by editing pg_hba.conf or using the option -A,
    or
--auth-local and --auth-host, the next time you run initdb.
Success. You can now start the database server using:
pg_ctl -D /var/lib/postgres/data -l logfile start
```

as you can see all is being done from the postgres user as it will be the only user meant to be using the database

$$pg\_ctl \quad -D \quad /var/lib/postgres/data \quad -l \quad logfile \quad start$$

```
waiting for server to start..../bin/sh: line 1: logfile:
    Permission denied
stopped waiting
pg_ctl: could not start server
Examine the log output.
```

2.3.1 granting root privileges to postgres user

let us make postgres a sudoer by adding it via the command 'sudo visudo'. Once that's done then issue the following command:

2.3.2 starting the postgresql service

$$systemctl \quad status \quad postgresql.service$$

```
    postgresql.service - PostgreSQL database server
    Loaded: loaded (/usr/lib/systemd/system/postgresql.service;
       disabled; vendor preset: disabled)
    Active: inactive (dead)
```

the following command then gets issued from the postgres user

$$initdb \quad --locale = en\_US.UTF-8 \quad -E \quad UTF8 \quad -D \quad /var/lib/postgres/data$$

```
initdb: error: directory "/var/lib/postgres/data" exists but is
    not empty
```

```
If you want to create a new database system, either remove or empty
the directory "/var/lib/postgres/data" or run initdb
with an argument other than "/var/lib/postgres/data".
```

2.3.3 housecleaning

ideally i'll try to remove or empty the directory mentioned above

$$sudo \quad mkdir \quad /var/lib/postgres/data$$

$$sudo \quad chown \quad postgres : postgres \quad /var/lib/postgres/data$$

$$sudo \quad -u \quad postgres \quad initdb \quad -D \quad /var/lib/postgres/data$$

```
mkdir: cannot create directory /var/lib/postgres/data: File exists
could not change directory to "/home/daniele": Permission denied
The files belonging to this database system will be owned by user
    "postgres".
This user must also own the server process.
The database cluster will be initialized with locales
COLLATE: en_GB.utf8
CTYPE:   en_GB.utf8
MESSAGES: en_GB.utf8
MONETARY: en_GB.UTF-8
NUMERIC: en_GB.UTF-8
TIME:    en_GB.UTF-8
The default database encoding has accordingly been set to "UTF8".
The default text search configuration will be set to "english".
Data page checksums are disabled.
initdb: error: directory "/var/lib/postgres/data" exists but is
    not empty
If you want to create a new database system, either remove or empty
the directory "/var/lib/postgres/data" or run initdb
with an argument other than "/var/lib/postgres/data".
```

3 We are good to go

Here I took some steps:

1. I removed the data folder with sudo privileges
2. I added postgres to the sudoers and rebooted
3. then issued the following commands again

$$sudo \quad mkdir \quad /var/lib/postgres/data$$

$$sudo \quad chown \quad postgres : postgres \quad /var/lib/postgres/data$$

$$sudo \quad -u \quad postgres \quad initdb \quad -D \quad /var/lib/postgres/data$$

$$postgresql - setup - -initdb$$

$$systemctlrestartpostgresql.service$$

$$systemctlenablepostgresql.service$$

and it all started to work but I've made another simpler guide which I'll be releasing shortly