

Principles of Database Systems

Assignment #1 - Initial Report

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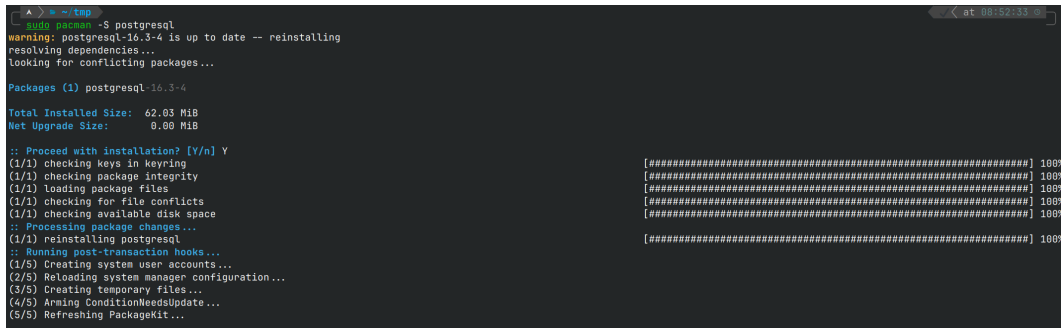
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1 Downloading and Installing PostgreSQL

Scence I am using Arch Linux as my primary operating system, I have installed PostgreSQL version 16.3-4 from the official repositories. Downloading and installing PostgreSQL on Arch Linux is as simple as running the following command:

```
$ sudo pacman -S postgresql
```

The result is shown in Fig. 1.



```

[~] ~$ sudo pacman -S postgresql
warning: postgresql-16.3-4 is up to date -- reinstalling
resolving dependencies...
looking for conflicting packages...

Packages (1) postgresql 16.3-4

Total Installed Size: 62.03 MiB
Net Upgrade Size:      0.00 MiB

:: Proceed with installation? [Y/n] Y
(1/1) checking keys in keyring [=====] 100%
(1/1) checking package integrity [=====] 100%
(1/1) loading package files [=====] 100%
(1/1) checking for file conflicts [=====] 100%
(1/1) checking available disk space [=====] 100%
:: Processing package changes...
(1/2) reinstalling postgresql
:: Running post-transaction hooks...
(1/5) Creating system user accounts...
(2/5) Reloading system manager configuration...
(3/5) Creating temporary files...
(4/5) Arming ConditionNeedsUpdate...
(5/5) Refreshing PackageKit...
```

Figure 1: Downloading and installing PostgreSQL on Arch Linux

2 Running PostgreSQL

After installing PostgreSQL, I started the PostgreSQL service by running the following command:

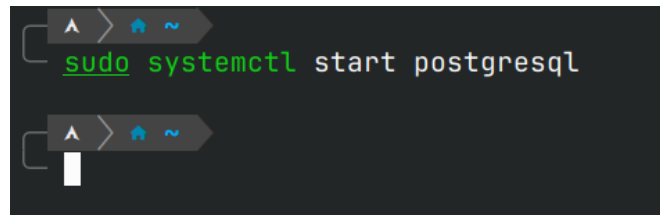
```
$ sudo systemctl start postgresql
```

The result is shown in Figure 2.

3 Trying to Connect to PostgreSQL

I tried to connect to the PostgreSQL server by running the following command:

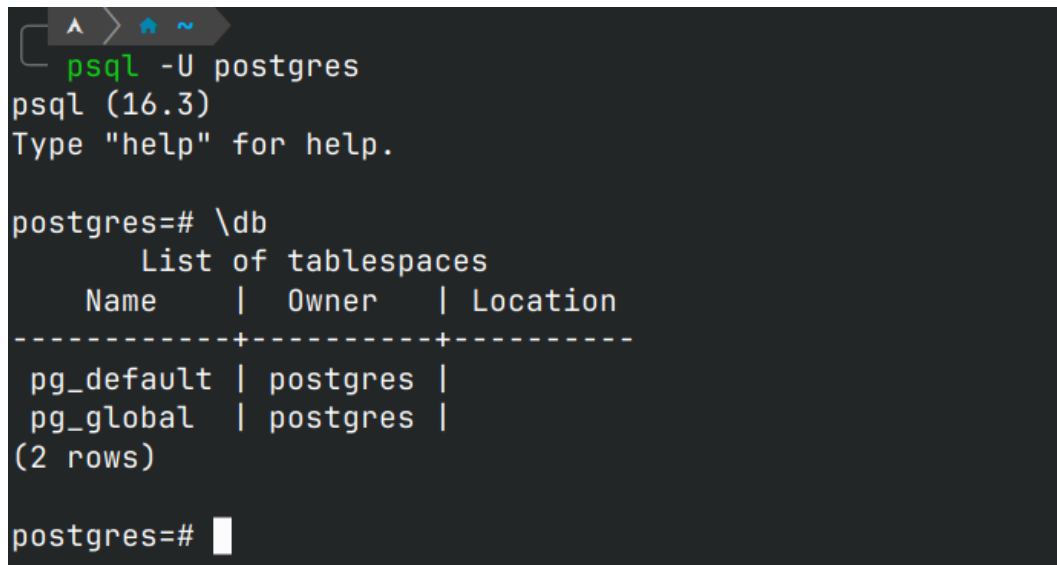
```
$ psql -U postgres
```



```
^ > ~  
sudo systemctl start postgresql  
  
^ > ~
```

Figure 2: Starting PostgreSQL service

The `-U` option is used to specify the username for connecting to the server. The default username is `postgres`, which is the superuser for the PostgreSQL server. After connecting, use `\db` to list all databases. The result is shown in Figure 3.



```
^ > ~  
psql -U postgres  
psql (16.3)  
Type "help" for help.  
  
postgres=# \db  
List of tablespaces  
Name | Owner | Location  
-----+-----+-----  
pg_default | postgres |  
pg_global | postgres |  
(2 rows)  
  
postgres=#
```

Figure 3: Connecting to PostgreSQL server