



# Complete Guide: Installing and Removing PostgreSQL



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PostgreSQL is an open-source relational database management system. It is known for its reliability, scalability, and extensibility, making it a popular choice for enterprise-level applications. In this tutorial, we will cover how to install and set up PostgreSQL in Linux, how to create a database and table, how to insert values into the table, how to log in to a user and database, and how to completely remove PostgreSQL including all related files.

Before we begin, make sure you have the following prerequisites:

- Linux installed on your system
- A terminal emulator with root privileges

## Step 1: Installing PostgreSQL

To install PostgreSQL in Linux, follow these steps:

**Note that while the instructions for creating a database, inserting values, and logging in to a user and database are applicable to PostgreSQL on any Linux distribution, the installation and deletion commands used in this tutorial are specific to Arch Linux.**

1. Open the terminal emulator.

## 2. Update the package list:

```
sudo pacman -Syu
```

## 1. Install PostgreSQL using the following command:

```
sudo pacman -S postgresql
```

This will install PostgreSQL on your system.

## Step 2: Setting up PostgreSQL

After installing PostgreSQL, you need to perform some initial setup before you can use it. Follow these steps:

## 1. Initialize the PostgreSQL data directory using the following command:

```
sudo -i postgres initdb -D /var/lib/postgres/data
```

This command initializes the PostgreSQL data directory with default settings.

## 1. Start the PostgreSQL service:

```
sudo systemctl start postgresql.service
```

## 1. Enable the PostgreSQL service:









```
sudo systemctl enable postgresql.service
```

This command ensures that PostgreSQL starts automatically on system boot.

### Step 3: Creating a Database and Table

After setting up PostgreSQL, you can create a database and table. Follow these steps:

1. Log in to the PostgreSQL server as the `postgres` user:

```
sudo -iu postgres psql
```

1. Create a new database using the following command:

```
CREATE DATABASE mydb;
```

This command creates a new database named `mydb`.

1. Connect to the newly created database using the following command:

```
\c mydb
```

1. Create a new table in the database using the following command:

```
CREATE TABLE mytable (id serial PRIMARY KEY, name VARCHAR(50), age INTEGER);
```

This command creates a new table named `mytable` with three columns: `id`, `name`, and `age`.

#### Step 4: Inserting Values into the Table

After creating the database and table, you can insert values into the table. Follow these steps:

1. Insert a new row into the table using the following command:

```
INSERT INTO mytable (name, age) VALUES ('John Doe', 30);
```

This command inserts a new row into the `mytable` table with `name` set to `John Doe` and `age` set to `30`.

1. View the contents of the table using the following command:

```
SELECT * FROM mytable;
```



This command displays the contents of the `mytable` table.

## Step 5: Logging in to a User and Database

After creating a database and table, you may want to log in to a specific user and database. Follow these steps:

1. Log in to the PostgreSQL server as the `postgres` user:

```
sudo -iu postgres psql
```

1. Create a new user using the following command:

```
CREATE USER myuser WITH PASSWORD 'mypassword';
```

This command creates a new user named `myuser` with the password `mypassword`.

1. Grant permissions to the new user using the following command:

```
GRANT ALL PRIVILEGES ON DATABASE mydb TO myuser;
```

This command grants all privileges to the `mydb` database to the `myuser` user.

1. Exit the PostgreSQL prompt using the following command:

```
\q
```

1. Log in to the PostgreSQL server as the `myuser` user:

```
psql -U myuser -d mydb
```

This command logs in to the `mydb` database as the `myuser` user.

## Step 6: Removing PostgreSQL

If you want to remove PostgreSQL from your Linux system, you can do so using the following steps:

1. Stop the PostgreSQL service:

```
sudo systemctl stop postgresql.service
```

1. Remove the PostgreSQL package using the following command:

```
sudo pacman -Rs postgresql
```

1. Remove the PostgreSQL data directory and configuration files using the following command:

```
sudo rm -r /var/lib/postgres/data  
sudo rm -rf /etc/postgresql/
```

These commands will remove the PostgreSQL data directory ( `/var/lib/postgres/` ) and configuration files ( `/etc/postgresql/` ).

## Conclusion

PostgreSQL is a powerful and reliable relational database management system that is widely used in enterprise-level applications. In this tutorial, we covered how to install and set up PostgreSQL in Linux, how to create a database and table, how to insert values into the table, how to log in to a user and database, and how to completely remove PostgreSQL including all related files.

## References:

[PostgreSQL-ArchLinux](#)

[postgresql.org](https://www.postgresql.org)

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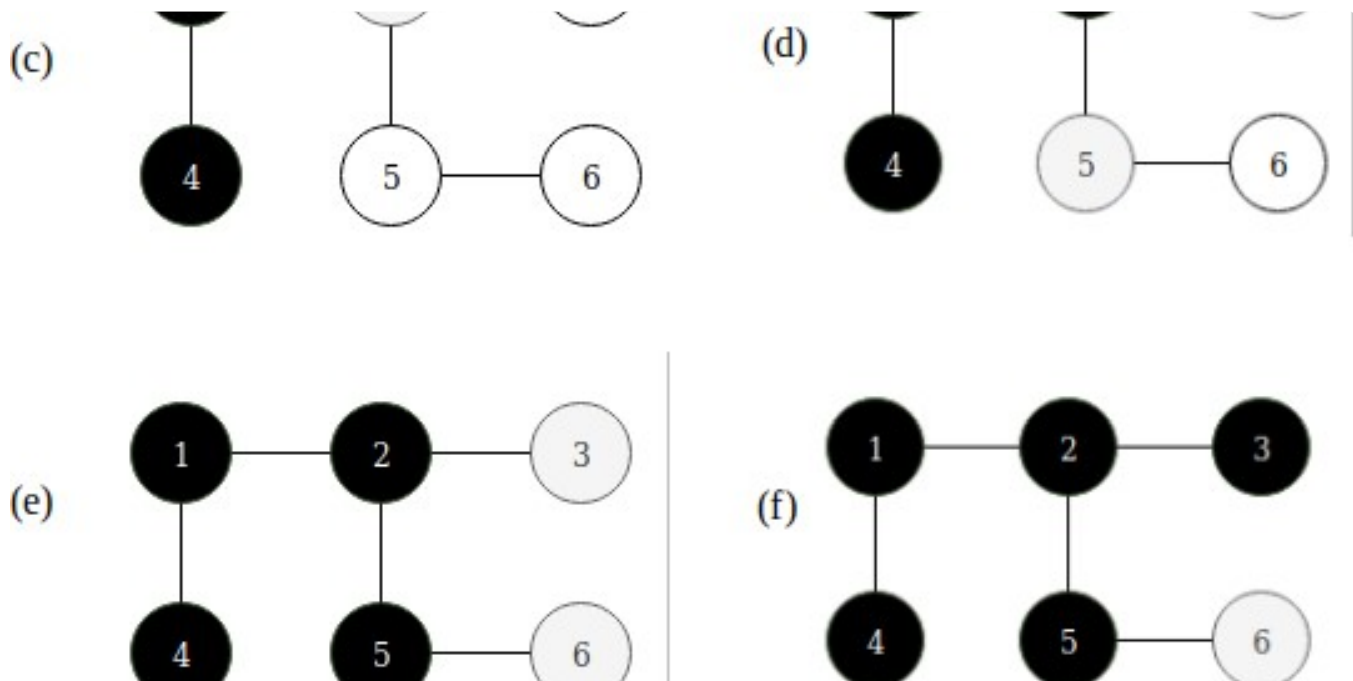
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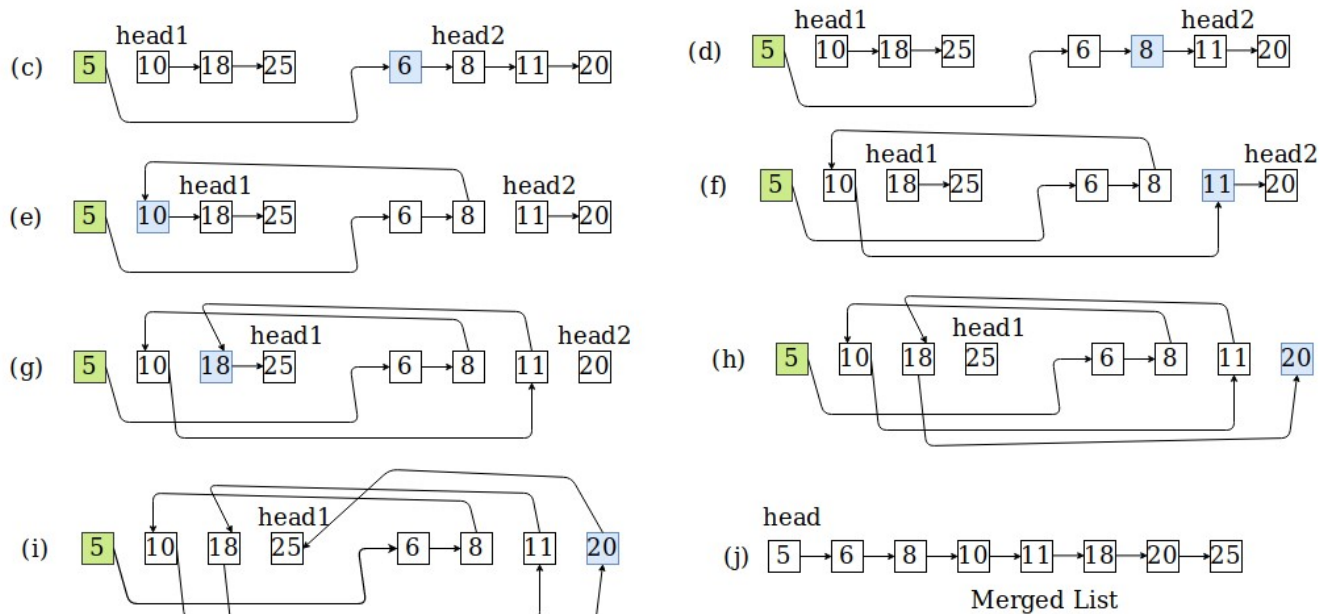


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```
botman@ArchLinuxPC ~]$ lsblk
AME      MAJ:MIN RM   SIZE RO TYPE MOUNTPOINTS
da        8:0    0 931.5G  0 disk
--sda1    8:1    0   100M  0 part
--sda2    8:2    0    16M  0 part
--sda3    8:3    0 219.1G  0 part
--sda4    8:4    0   543M  0 part
--sda5    8:5    0  97.7G  0 part
--sda6    8:6    0   104G  0 part
--sda7    8:7    0 313.8G  0 part /run/media/botman/New Volume
--sda8    8:8    0    30G  0 part /
--sda9    8:9    0   130G  0 part /home
--sda10   8:10   0   36.3G  0 part [SWAP]
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```

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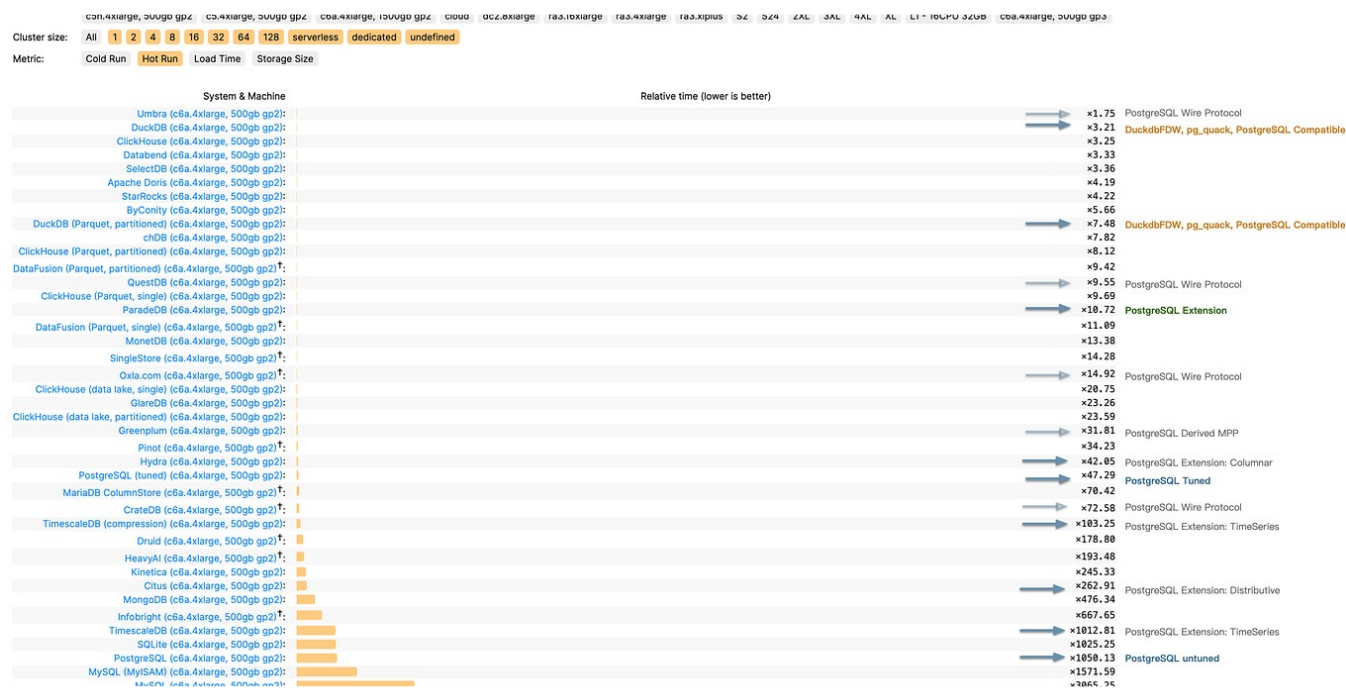
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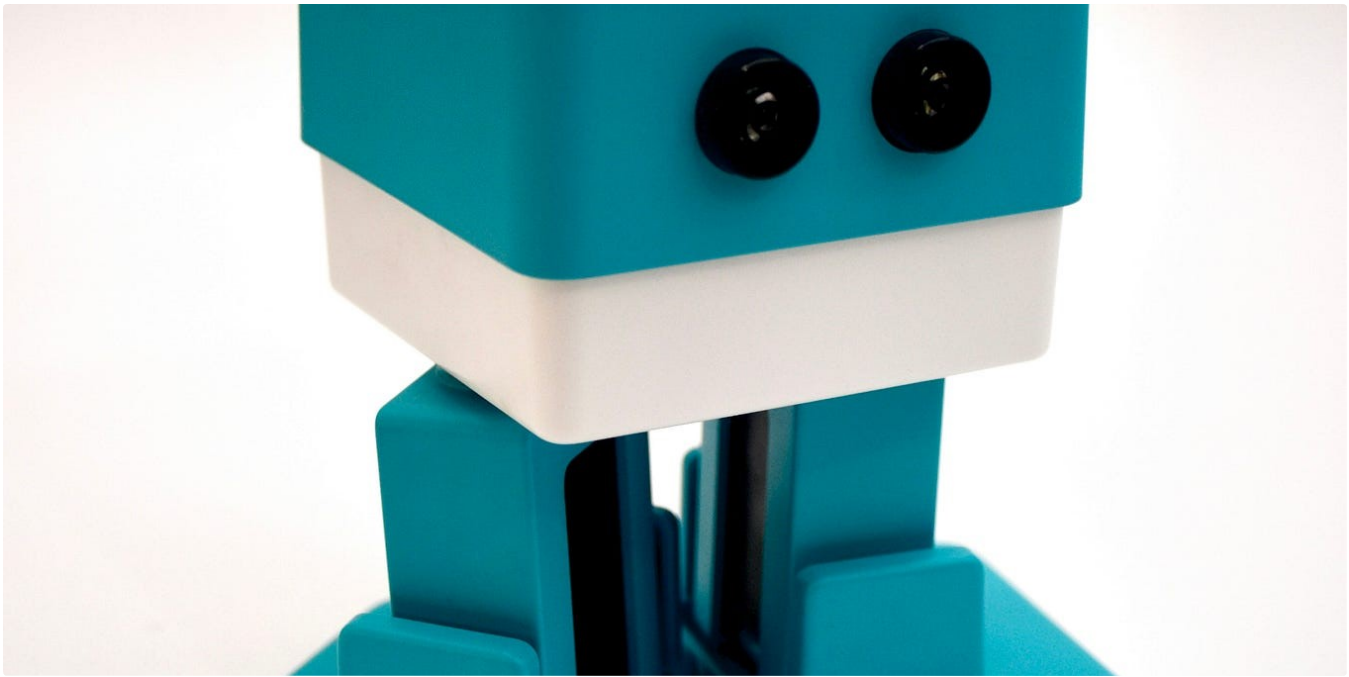


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```
# - explore the data shown over multiple pages
# - expand or reduce the number of rows
# - use the sort and/or search controls
from itables.sample_dfs import get_countries

df = get_countries(html=False)
df
```

[ ]:



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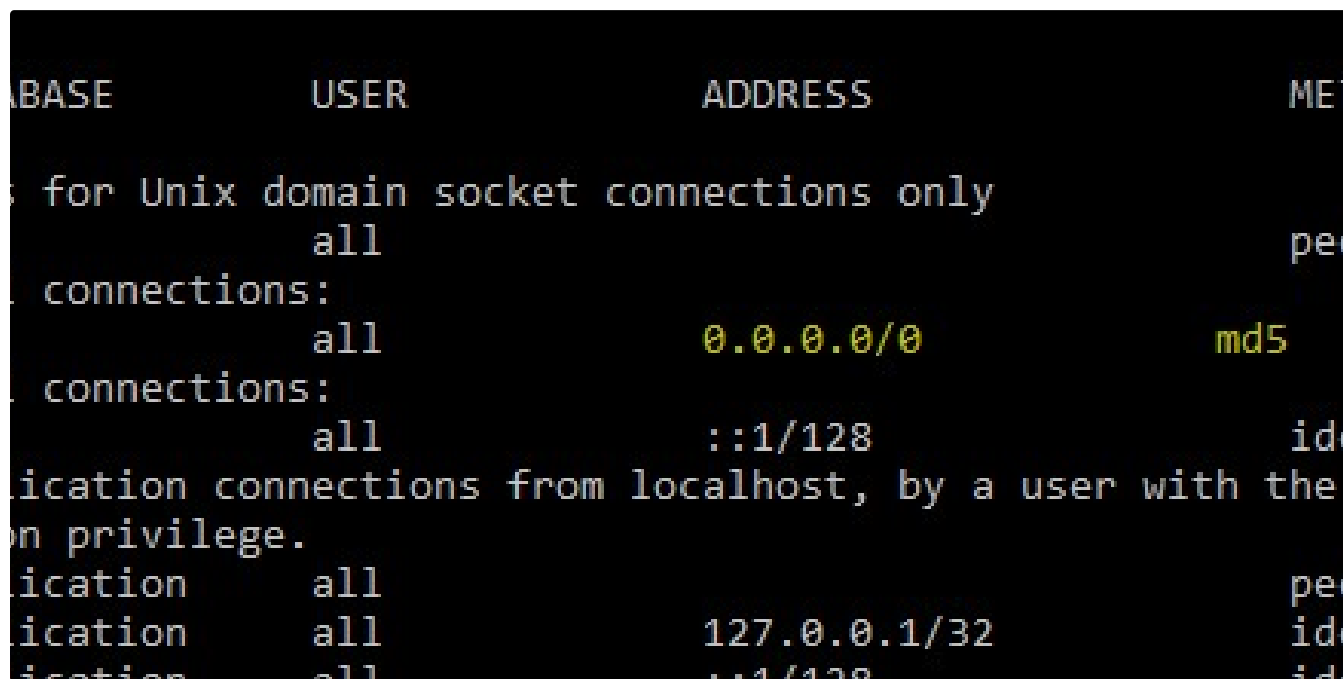
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