

How to Manage a User in PostgreSQL?

written by sysadmin | 8 November 2025

[The previous article](#) explained the basic commands in the PostgreSQL database. This article will explain how to set up a user in PostgreSQL.

Problem

How to manage a user in PostgreSQL?

Solution

By default, PostgreSQL runs MD5 encryption to save PostgreSQL user passwords in the pg_authid table. However, since PostgreSQL version 10 and later, PostgreSQL has added scram-sha-256 encryption, which is more secure compared to MD5 encryption. To use this encryption, you have to go to the **/etc/postgresql/18/main/postgresql.conf** file if you use PostgreSQL 18 and look for the word **scram-sha-256** in the file, and open the fence located to the left of the word so it looks like the one below:

```
password_encryption = scram-sha-256
```

Then restart PostgreSQL using the command:

```
sudo systemctl restart postgresql
```

A. List all users

To see all users in PostgreSQL, type the following command:

```
\du
```

```
postgres=# \du
                                List of roles
Role name | Attributes
-----+-----
postgres | Superuser, Create role, Create DB, Replication, Bypass RLS
postgres=#
```

List all users in PostgreSQL

By default, PostgreSQL uses the postgres user to access all databases in PostgreSQL.

B. Create a new user

To create a new user in PostgreSQL, use the format below on the PostgreSQL server:

```
create user username with encrypted password 'your-password';
```

For example, if you want to create a mydb_user user with the password qwerty, then use the command below:

```
create user mydb_user with encrypted password 'qwerty';
```

```
postgres=# create user mydb_user with encrypted password 'qwerty';
CREATE ROLE
postgres=# \du
                                List of roles
Role name | Attributes
-----+-----
mydb_user | 
postgres | Superuser, Create role, Create DB, Replication, Bypass RLS
postgres=#
```

Create a user in PostgreSQL

C. Change user password

To change the password in PostgreSQL, use the format below:

```
ALTER USER username WITH PASSWORD 'your_password';
```

For example, if you want to change the password for the mydb_user to q1w2e3, then use the command below:

```
ALTER USER mydb_user WITH PASSWORD 'q1w2e3';
```

```
mydb=# ALTER USER mydb_user WITH PASSWORD 'q1w2e3';  
ALTER ROLE  
mydb=#
```



Change the password in PostgreSQL

D. Create a user privilege

To give the user privileges for a database in PostgreSQL using the format below:

```
GRANT permission_type ON db_name TO username;
```

For example, in the previous article, you created a mydb database, so use the command below to grant all permission types:

```
grant all privileges on database mydb to mydb_user;
```

```
postgres=# grant all privileges on database mydb to mydb_user;  
GRANT
```



Grant all to the user in PostgreSQL

If you want a user to only be able to view the mydb database for the sysadmin user, use the command below:

```
CREATE user john with encrypted password '123456';  
GRANT CONNECT ON DATABASE mydb TO john;  
\c mydb  
GRANT USAGE ON SCHEMA public TO john;  
GRANT SELECT ON ALL TABLES IN SCHEMA public TO john;
```

```

mydb=# CREATE user john with encrypted password '123456';
CREATE ROLE
mydb=# GRANT CONNECT ON DATABASE mydb TO john;
GRANT
mydb=# \c mydb
You are now connected to database "mydb" as user "postgres".
mydb=# GRANT USAGE ON SCHEMA public TO john;
GRANT
mydb=# GRANT SELECT ON ALL TABLES IN SCHEMA public TO john;
GRANT
mydb=#

```

Grant viewer only in PostgreSQL

To see the grants you have made in PostgreSQL, use the command:

`\l+`

```
mydb=# \l+
```

Name	Owner	Encoding	Locale Provider	Collate	Ctype	Locale	ICU Rules	Access privileges	Size	Tablespace	Description
mydb	postgres	UTF8	libc	en_US.UTF-8	en_US.UTF-8			=Tc/postgres postgres=Ctc/postgres mydb_user=Ctc/postgres john=c/postgres	7742 kB	pg_default	
postgres	postgres	UTF8	libc	en_US.UTF-8	en_US.UTF-8			=c/postgres	7670 kB	pg_default	default administrative connection database
template0	postgres	UTF8	libc	en_US.UTF-8	en_US.UTF-8			postgres=Ctc/postgres	7513 kB	pg_default	unmodifiable empty database
template1	postgres	UTF8	libc	en_US.UTF-8	en_US.UTF-8			=c/postgres postgres=Ctc/postgres	7742 kB	pg_default	default template for new databases

(4 rows)

```
mydb=#
```

List all grants in PostgreSQL

E. Remove a user privilege

If you want to remove a privilege from a user, you can use the format below:

```
REVOKE permission_type ON table_name FROM user_name;
```

For example, if you want to remove a privilege for mydb_user, use the command below:

```
REVOKE all privileges on database mydb FROM mydb_user;
```

```

mydb=# \l+
          List of databases
  Name | Owner  | Encoding | Locale Provider | Collate | Ctype  | Locale | ICU Rules | Access privileges | Size | Tablespace | Description
-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----
mydb   | postgres | UTF8     | libc            | en_US.UTF-8 | en_US.UTF-8 |         |           | =Tc/postgres + postgres=Ctc/postgres + mydb_user=Ctc/postgres + john=C/postgres | 7742 kB | pg_default |
postgres | postgres | UTF8     | libc            | en_US.UTF-8 | en_US.UTF-8 |         |           | =c/postgres + postgres=Ctc/postgres | 7670 kB | pg_default | default administrative connection database
template0 | postgres | UTF8     | libc            | en_US.UTF-8 | en_US.UTF-8 |         |           | =c/postgres + postgres=Ctc/postgres | 7513 kB | pg_default | unmodifiable empty database
template1 | postgres | UTF8     | libc            | en_US.UTF-8 | en_US.UTF-8 |         |           | =c/postgres + postgres=Ctc/postgres | 7742 kB | pg_default | default template for new databases
(4 rows)

mydb=# REVOKE all privileges on database mydb FROM mydb_user;
REVOKE
mydb=#
mydb=# \l+
          List of databases
  Name | Owner  | Encoding | Locale Provider | Collate | Ctype  | Locale | ICU Rules | Access privileges | Size | Tablespace | Description
-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----
mydb   | postgres | UTF8     | libc            | en_US.UTF-8 | en_US.UTF-8 |         |           | =Tc/postgres + postgres=Ctc/postgres + john=C/postgres | 7742 kB | pg_default |
postgres | postgres | UTF8     | libc            | en_US.UTF-8 | en_US.UTF-8 |         |           | =c/postgres + postgres=Ctc/postgres | 7670 kB | pg_default | default administrative connection database
template0 | postgres | UTF8     | libc            | en_US.UTF-8 | en_US.UTF-8 |         |           | =c/postgres + postgres=Ctc/postgres | 7513 kB | pg_default | unmodifiable empty database
template1 | postgres | UTF8     | libc            | en_US.UTF-8 | en_US.UTF-8 |         |           | =c/postgres + postgres=Ctc/postgres | 7742 kB | pg_default | default template for new databases
(4 rows)

```

Revoke all grants from a user

Or, use the below command if you want to revoke from user john:

REVOKE CONNECT on database mydb FROM john;

```

mydb=# \l+
          List of databases
  Name | Owner  | Encoding | Locale Provider | Collate | Ctype  | Locale | ICU Rules | Access privileges | Size | Tablespace | Description
-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----
mydb   | postgres | UTF8     | libc            | en_US.UTF-8 | en_US.UTF-8 |         |           | =Tc/postgres + postgres=Ctc/postgres + john=C/postgres | 7742 kB | pg_default |
postgres | postgres | UTF8     | libc            | en_US.UTF-8 | en_US.UTF-8 |         |           | =c/postgres + postgres=Ctc/postgres | 7670 kB | pg_default | default administrative connection database
template0 | postgres | UTF8     | libc            | en_US.UTF-8 | en_US.UTF-8 |         |           | =c/postgres + postgres=Ctc/postgres | 7513 kB | pg_default | unmodifiable empty database
template1 | postgres | UTF8     | libc            | en_US.UTF-8 | en_US.UTF-8 |         |           | =c/postgres + postgres=Ctc/postgres | 7742 kB | pg_default | default template for new databases
(4 rows)

mydb=# REVOKE CONNECT on database mydb FROM john;
REVOKE
mydb=# \l+
          List of databases
  Name | Owner  | Encoding | Locale Provider | Collate | Ctype  | Locale | ICU Rules | Access privileges | Size | Tablespace | Description
-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----
mydb   | postgres | UTF8     | libc            | en_US.UTF-8 | en_US.UTF-8 |         |           | =Tc/postgres + postgres=Ctc/postgres | 7742 kB | pg_default |
postgres | postgres | UTF8     | libc            | en_US.UTF-8 | en_US.UTF-8 |         |           | =c/postgres + postgres=Ctc/postgres | 7670 kB | pg_default | default administrative connection database
template0 | postgres | UTF8     | libc            | en_US.UTF-8 | en_US.UTF-8 |         |           | =c/postgres + postgres=Ctc/postgres | 7513 kB | pg_default | unmodifiable empty database
template1 | postgres | UTF8     | libc            | en_US.UTF-8 | en_US.UTF-8 |         |           | =c/postgres + postgres=Ctc/postgres | 7742 kB | pg_default | default template for new databases
(4 rows)

```

Revoke connect only from a user

F. Delete a user

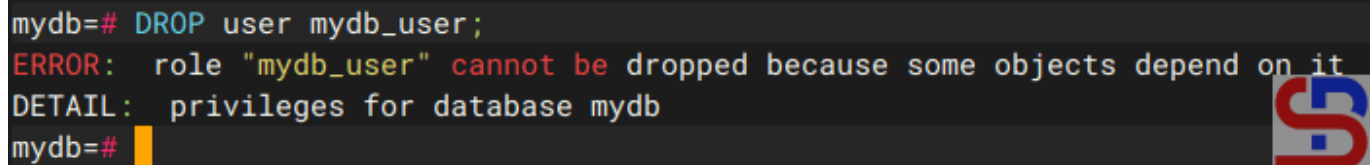
Use the format below to delete a user in PostgreSQL:

DROP USER username;

If you want to delete mydb_user, use the command below:

DROP user mydb_user;

```
mydb=# DROP user mydb_user;  
ERROR:  role "mydb_user" cannot be dropped because some objects depend on it  
DETAIL:  privileges for database mydb  
mydb=#
```

A terminal window with a dark background. The text is in a monospaced font. The first line is a command to drop a user. The second line is an error message in red. The third line is a detail message. The fourth line is the prompt. On the right side, there is a logo consisting of a stylized 'S' in blue and red.

Error when dropping a user in PostgreSQL

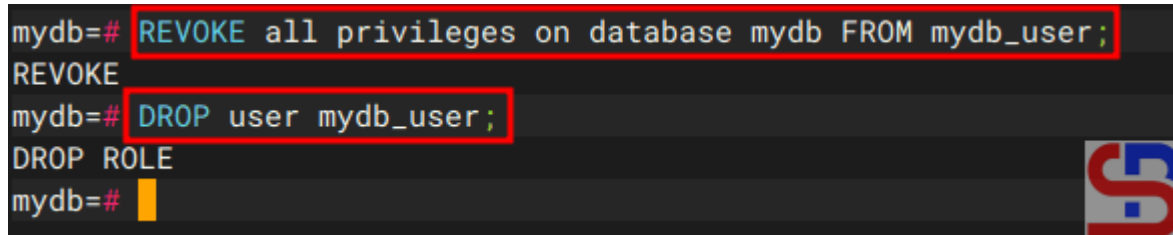
You can see from the image above, there is an error when you want to delete a user. So, you have to remove some objects that depend on it. Use the command below:

```
REVOKE all privileges on database mydb FROM mydb_user;
```

and then delete the user using the below command:

```
DROP user mydb_user;
```

```
mydb=# REVOKE all privileges on database mydb FROM mydb_user;  
REVOKE  
mydb=# DROP user mydb_user;  
DROP ROLE  
mydb=#
```

A terminal window with a dark background. The text is in a monospaced font. The first line is a command to revoke privileges. The second line is the output. The third line is a command to drop a user. The fourth line is the output. The fifth line is the prompt. On the right side, there is a logo consisting of a stylized 'S' in blue and red.

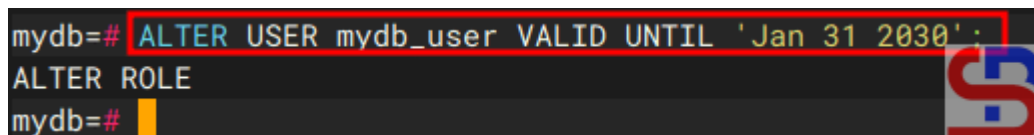
Drop a user in PostgreSQL

Note

If you want a user to only be able to access the PostgreSQL database for a certain time, for example, until January 31, 2030, use the command below:

```
ALTER USER mydb_user VALID UNTIL 'Jan 31 2030';
```

```
mydb=# ALTER USER mydb_user VALID UNTIL 'Jan 31 2030';  
ALTER ROLE  
mydb=#
```

A terminal window with a dark background. The text is in a monospaced font. The first line is a command to alter a user. The second line is the output. The third line is the prompt. On the right side, there is a logo consisting of a stylized 'S' in blue and red.

Provides time constraints for users in PostgreSQL

References

medium.com

datacamp.com

digitalocean.com
sentry.io