

# PostgreSQL

- Migrate Database
- Backup Database

# Migrate Database

## Find Settings of existing Database

```
sudo -u postgres psql --cluster <version>/main

-- Database-level info
\l+ your_database

-- Server-wide settings
SHOW SERVER_ENCODING;
SHOW LC_COLLATE;
SHOW LC_CTYPE;

-- Installed extensions
\dx

-- Example Output
Name | Owner | Encoding | Collate | Ctype | Access privileges
-----+-----+-----+-----+-----+-----
your_database | appuser | UTF8 | en_US.utf8 | en_US.utf8 |
```

## Export existing Database

```
sudo -u postgres pg_dump -h <server> -p <port> -U <user> -W -Fc -f <output file> <database>

-h = Hostname
-p = Port
-U = Username
-W = Prompt for Password
-Fc = pg_dump non-Text-Format (required for pg_restore)
-f = Output File
```

- Command needs to be run with `sudo -u postgres` as the postgres User has (as default) only local Access and only direct Login without any Password.

## (Optional) Copy to new Server

```
scp <path-to-dump> <user>@<server>:/tmp/<filename.dump>
```

## Create User on new Database

```
sudo -u postgres psql --cluster <version>/main -c "CREATE USER <username> WITH PASSWORD '<password>';"
```

## Create (empty) Database

## Restore Database

```
sudo -u postgres pg_restore -h <server> -p <port> -U <user> -d <database> -c <input_file>
```

-h = Hostname  
-p = Port  
-U = Username  
-W = Prompt for Password  
-d = (New) Database Name  
-c = Input File

# Backup Database

## Find Database to Backup

### 1. List all Postgres Instances:

```
pg_lsclusters
```

```
root@SRV-PSQL-PRD-01:~# pg_lsclusters
perl: warning: Setting locale failed.
perl: warning: Please check that your locale settings:
    LANGUAGE = (unset),
    LC_ALL = (unset),
    LANG = "de_DE.UTF-8"
are supported and installed on your system.
perl: warning: Falling back to the standard locale ("C").
Ver Cluster Port Status Owner  Data directory          Log file
13  main   5432 online postgres /var/lib/postgresql/13/main /var/log/postgresql/postgresql-13-main.log
15  main   5433 online postgres /var/lib/postgresql/15/main /var/log/postgresql/postgresql-15-main.log
```

### 2. Connect to Cluster

```
sudo -u postgres psql --cluster <version>/<release>
```

```
root@SRV-PSQL-PRD-01:~# sudo -u postgres psql --cluster 15/main
perl: warning: Setting locale failed.
perl: warning: Please check that your locale settings:
    LANGUAGE = (unset),
    LC_ALL = (unset),
    LANG = "de_DE.UTF-8"
are supported and installed on your system.
perl: warning: Falling back to the standard locale ("C").
could not change directory to "/root": Permission denied
psql (15.14 (Debian 15.14-1.pgdg12+1))
Type "help" for help.
```

### 3. List Databases

```
\du
```

```
postgres=# \du
```

List of roles

Role name	Attributes	Member of
-----+-----+-----		
forgejo	Create DB	{}
postgres	Superuser, Create role, Create DB, Replication, Bypass RLS	{}
zabbix		

#### 4. Disconnect

```
\q
```

## Create Backup of Database