

Load PostgreSQL Sample Database

Summary: in this tutorial, you will learn how to load the **PostgreSQL sample database** into the PostgreSQL database server.

Before going forward with this tutorial, you need to have:

- A PostgreSQL database server.
- A PostgreSQL sample database called `dvdrental`.

Load the sample database using the psql & pg_restore tool

`psql` is a terminal-based client tool to PostgreSQL. It allows you to enter queries, send them to PostgreSQL for execution, and display the results.

`pg_restore` is a utility for restoring a database from an archive.

To create a database and load data from an archive file, you follow these steps:

- First, connect to the PostgreSQL database server using `psql` or `pgAdmin`.
- Second, create a blank database called `dvdrental`.
- Third, load data from the sample database file into the `dvdrental` database using `pg_restore`.

1) Create the dvdrental database

First, open the Command Prompt on Windows or Terminal on Unix-like systems and connect to the PostgreSQL server using **psql** tool:

```
psql -U postgres
```

It'll prompt you to enter a password for the `postgres` user:
Password for user postgres:

The password for the `postgres` user is the one you entered during the PostgreSQL installation.

After entering the password correctly, you will be connected to the PostgreSQL server.

The command prompt will look like this:
`postgres=#`Code language: PHP (php)

Second, create a new database called `dvdrental` using `CREATE DATABASE` statement:
`CREATE DATABASE dvdrental;`Code language: SQL (Structured Query Language) (sql)

Output:
`CREATE DATABASE`

PostgreSQL will create a new database called `dvdrental`.

Third, verify the database creation using the `\l` command. The `\l` command will show all databases in the PostgreSQL server:
`\l`

Output:

List of databases									
Name	Owner	Encoding	Locale Provider	Collate	Ctype	ICU Locale	ICU Rules		
dvdrental	postgres	UTF8	libc	English_United States.1252	English_United States.1252				
postgres	postgres	UTF8	libc	English_United States.1252	English_United States.1252				
template0	postgres	UTF8	libc	English_United States.1252	English_United States.1252				=
template1	postgres	UTF8	libc	English_United States.1252	English_United States.1252				=
									p
									p

(4 rows)Code language: PHP (php)

The output shows that `dvdrental` on the list, meaning that you have created the `dvdrental` database successfully.

Note that other databases such as `postgres`, `template0`, and `template1` are the system databases.

Fourth, disconnect from the PostgreSQL server and exit the `psql` using the `exit` command:
`exit`Code language: PHP (php)

2) Restore the sample database from a tar file

Fifth, download the sample database (`dvdrental.zip`) and extract the `tar` file to the directory such as `D:\sampledb\postgres\dvdrental.tar` on Windows.

Sixth, load the `dvdrental` database using the `pg_restore` command:
`pg_restore -U postgres -d dvdrental D:\sampledb\postgres\dvdrental.tar`Code language: CSS (css)

In this command:

- The `-U postgres` instructs `pg_restore` to connect the PostgreSQL server using the `postgres` user.
- The `-d dvdrental` specifies the target database to load.

It'll prompt you to enter the password for the `postgres` user. Enter the password for the `postgres` user and press the Enter (or Return key):
Password:

It'll take about seconds to load data stored in the `dvdrental.tar` file into the `dvdrental` database.

3) Verify the sample database

First, connect to the PostgreSQL server using the `psql` command:

```
psql -U postgres
```

Second, switch the current database to dvdrental:

```
\c dvdrental
```

The command prompt will change to the following:

```
dvdrental=#Code language: PHP (php)
```

Third, display all tables in the `dvdrental` database:

 $\backslash dt$

Output:

List of relations			
Schema	Name	Type	Owner
public	actor	table	postgres
public	address	table	postgres
public	category	table	postgres
public	city	table	postgres
public	country	table	postgres
public	customer	table	postgres
public	film	table	postgres
public	film_actor	table	postgres
public	film_category	table	postgres
public	inventory	table	postgres
public	language	table	postgres
public	payment	table	postgres
public	rental	table	postgres
public	staff	table	postgres
public	store	table	postgres

(15 rows) Code language: PHP (php)

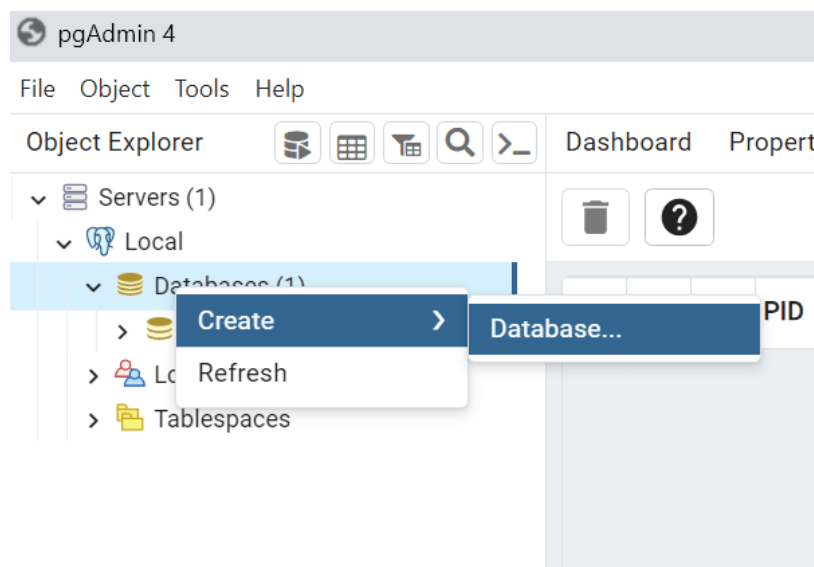
Load the DVD Rental database using the pgAdmin

pgAdmin is a web-based graphic user interface (GUI) for interacting with the PostgreSQL server.




The following shows you step-by-step how to use the pgAdmin to restore the sample database from the database file:

First, launch the **pgAdmin** tool and connect to the PostgreSQL server.

Second, right-click the **Databases** and select the **Create > Database...** menu option:



Third, enter the database name `dvdrental` and click the **Save** button:

 **Create - Database**  

General

Definition

Security

Parameters


Advanced


SQL

Database



OID


Owner


 postgres




Comment

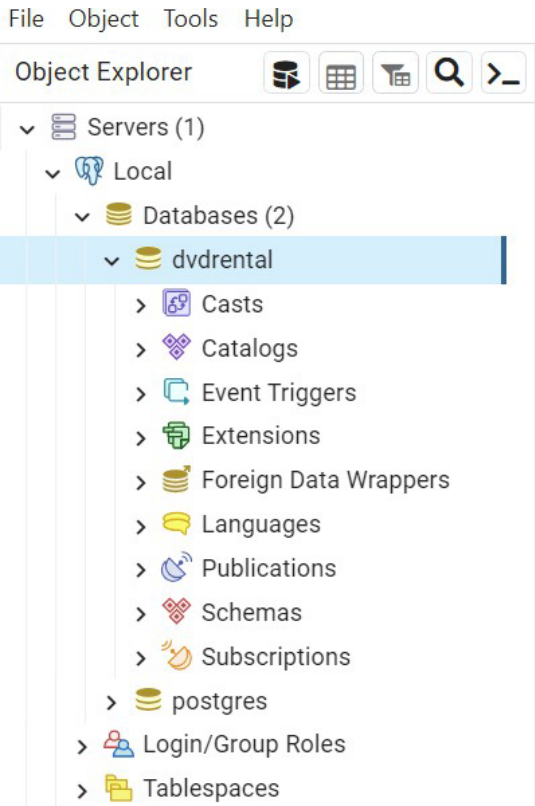
 

 Close

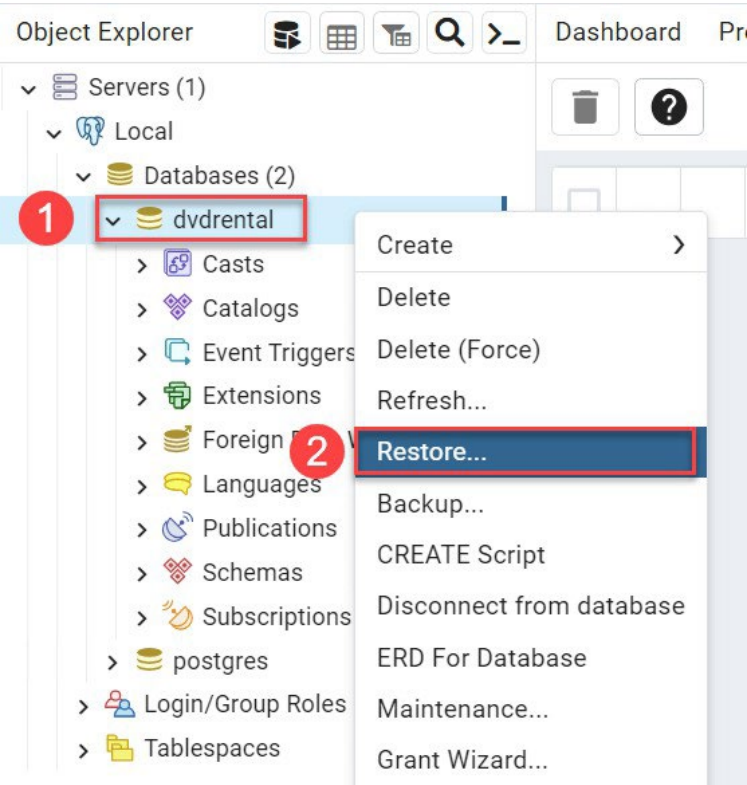
 Reset

 Save

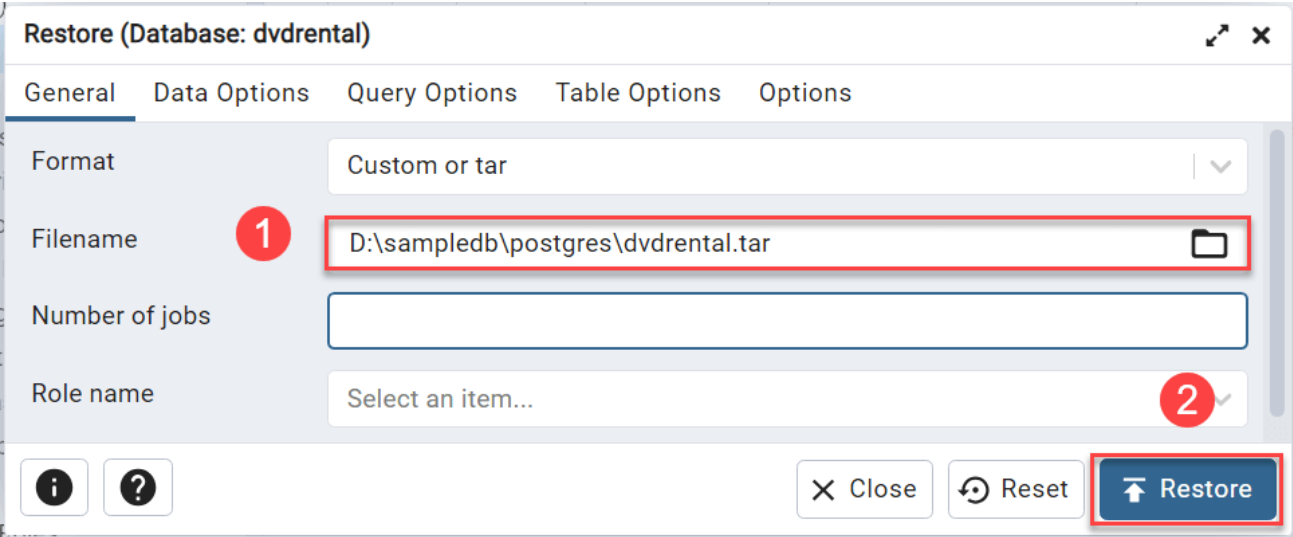
You'll see the new empty database created under the **Databases** node:



Fourth, right-click on the **dvdrental** database and choose the **Restore...** menu item to restore the database from the downloaded database file:



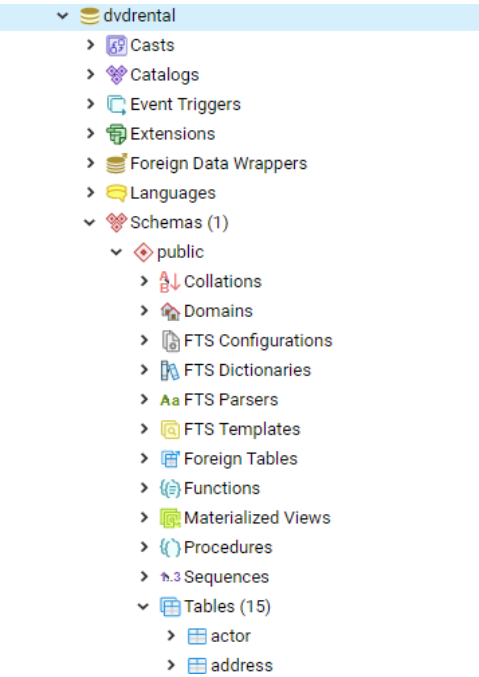
Fifth, enter the path to the sample database file such as **c:\sampledb\dvdrental.tar** and click the **Restore** button:



Sixth, the restoration process will complete in a few seconds and show the following dialog once it completes:

		PID	Type	Server	Object	Start Time ▾	Status	Time To
	✕	22024	Restore	Local (localhost:5432)	dvdrental		Finished	2.85

Finally, open the `dvdrental` database from the object browser panel, you will find tables in the `public` schema and other database objects as shown in the following picture:



In this tutorial, you have learned how to load the `dvdrental` sample database into the PostgreSQL database server for practicing PostgreSQL.

Let's start learning PostgreSQL and have fun!
Was this tutorial helpful ?