PostgreSQL: Client Applications

with Adam Wilbert



PostgreSQL Command-Line Quick Reference

PSQL Interactive Terminal

Connection Options

-h hostname host=hostname	Host IP, machine name, or localhost (default: local socket)
-p portnumber port=portnumber	Communication port (default: 5432)
-U username username=username	Role/username (default: OS username)
-d databasename dbname=databasename	Name of the database to connect to (default: OS user name, then Postgres)
-V version	Print the psql version and exit.
-? help=topic	Print general psql help documentation or specific help about a topic.
-l list	List available databases, then exit.
-f filepath file filepath	Load and execute commands within an external script file.
-c 'command'	Execute a SQL query or meta-command, then exit.
-X no-psqlrc	Ignore the custom settings contained in the psqlrc file.

Example Usage

psql -h localhost -p 5432 -d postgres -U postgres

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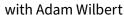
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Backslash Commands

\?	View help documentation on the psql meta-commands.
\q	Quit and exit the interactive terminal.
\c \connect	Switch databases within the same server. Parameters are entered in sequence: database, user, host, port. Use a single hyphen - to reuse current value.
\conninfo	Return details about the current connection.
\h [topic] \help [topic]	Print help documentation about SQL commands. enter – page through line by line space – skip to the next page q – quit to the psql prompt
\l \l+	List databases on the current server.
\du \duS	List user roles. Include system roles.
\dn \dnS	List database schemas (namespaces). Include system schemas.
\dt \dt schemaname. \dtS	List database tables within the users' search path. List tables in a specific schema. Include system tables.
\di	List database indexes.
\dv	List database view objects.
\d objectname	Describe object contents and list columns and data types.
\o filepath \o	Send query output to an external file. Send output to the internal aligned text display.
\set	View and update psql variables such as PROMPT1.
<pre>\pset \pset format aligned \pset format csv \pset format html \pset format latex \pset border 1 \pset title 'Title'</pre>	View and update options for aligned and unaligned tables and other output parameters.

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Create Backups with pg_dump and pg_restore

help	Print options for pg_dump and pg_restore.
> filepath	Set output filepath and filename for pg_dump.
cleanif-exists	Drop database objects before recreating them.
create	Add CREATE DATABASE commands to the script.
inserts	Use table INSERT commands instead of COPY for portability.
-s schema-only	Only include database objects in the backup file, no data.
-a data-only	Only include data in the backup, not objects.
-t tablename -t 'schema.*'	Only include a single table in the backup. Only include tables within a specific schema.
-Fp format plain	Create a plain-text backup file (default option).
-Fc format custom	Create a single-file archive backup.
-C	Create the empty database first when using pg_restore.
-1	Print table of contents of an archive format backup.
-L filepath	Load a table of content from an external file with pg_restore.

Example Usage

Create a backup:

pg_dump -h localhost -U postgres --format plain database > filepath/ backup.sql

Restore a plain-text backup:

psql -h localhost -d postgres -U postgres --file filepath/backup.sql Restore an archive format backup using a customized table of contents file:

pg_restore -h localhost -U postgres -d postgres -C -L filepath/custom.
contents filepath/database.dump

Full PostgreSQL client application documentation:

https://www.postgresql.org/docs/current/reference-client.html