



Enhance your psql client experience

Nico Schlebusch

.pgpass file

```
» ls -l ~/.pgpass
```

```
-rw----- 1 nico nico 440 Sep 19 00:07 /home/nico/.pgpass
```

```
# hostname:port:database:username:password
```

```
db1.example.com::sales:supersale:s3cr3tS@l#s]
```

```
db2.example.com::humanresources:superhuman:s3cr37Hum@n}
```

```
*:5432:marketing:supermark:s3cr3tM@rk|
```

```
localhost:15432:*:postgres:P0stgr#s_
```

psqlrc file

- Global /etc/psqlrc
- User specific ~/.psqlrc

```
» ls -l ~/.psqlrc
```

```
-rw-r--r-- 1 nico users 4797 Aug 23 01:31 /home/nico/.psqlrc
```

PROMPT1

- %M OR %m - The full host name OR the truncated host name
- %n - The current session user name
- %/ - The name of the current database
- %#
 - > for regular users,
 - # for database superusers
- %R - Expected input indicator, unbalanced quotes / missed a semicolon
- %X - TX status:
 - blank/empty/nothing/null when there's no TX,
 - * inside TX,
 - ! TX failed

PROMPT1

```
\set PROMPT1 '%n@m %/ %R%X%# '
```

```
nico@localhost dvdrental =>
```

- Inside TX

```
nico@localhost dvdrental => BEGIN;
```

```
nico@localhost dvdrental =*> ROLLBACK;
```

```
nico@localhost dvdrental =>
```

- Failed TX

```
nico@localhost dvdrental => BEGIN;
```

```
nico@localhost dvdrental =*> SELECT 1/0;
```

```
ERROR:  division by zero
```

```
nico@localhost dvdrental =!> ROLLBACK;
```

```
nico@localhost dvdrental =>
```

PROMPT1

- Poweruser

```
postgres@localhost dvdrental =#
```

- `%[... %]` - allows terminal control characters

```
nico@localhost dvdrental => \set PROMPT1 '%[%033[1;33;40m%]%n@%/%R%  
[%033[0m%]%# '
```

```
nico@dvdrental=>
```

PROMPT2

- Default:

```
dvdrental=# SELECT 'row 1' AS "ID",  
dvdrental-# 'Alice' AS "Name",  
dvdrental-# 1 AS "Total";
```

```
   ID   | Name  | Total  
-----+-----+-----  
row 1  | Alice |     1
```

```
\set PROMPT2 ''
```

```
dvdrental=# SELECT 'row 1' AS "ID",  
'Alice' AS "Name",  
1 AS "Total";
```

```
   ID   | Name  | Total  
-----+-----+-----  
row 1  | Alice |     1
```


HISTFILE

```
\set HISTFILE <filename>
```

- ~/.psql_history or

- %APPDATA%\postgresql\psql_history

```
\set HISTFILE ~/.psql_history-:DBNAME
```

- Per database history file

```
ls -l .psql_history*
```

```
-rw----- 1 nico users 54330 Sep 21 02:24 .psql_history
```

```
-rw----- 1 nico users 34 Sep 21 16:10 .psql_history-dvdrental
```


HISTCONTROL

```
\set HISTCONTROL <option>
```

- none (default)
- ignorespace
- ignoredups
- ignoreboth

null

```
\pset null <text>
```

```
\pset null
```

```
dvdrental=# select NULL;
```

```
?column?
```

```
-----
```

```
(1 row)
```

```
\pset null [NULL]
```

```
dvdrental=# select NULL;
```

```
?column?
```

```
-----
```

```
[NULL]
```

```
(1 row)
```

linestyle

```
\pset linestyle ascii | old-ascii | unicode
```

```
\pset linestyle ascii
```

```
actor_id | first_name | last_name |      last_update
-----+-----+-----+-----
          1 | Penelope   | Guinness  | 2013-05-26 14:47:57.62
```

```
\pset linestyle old-ascii
```

```
actor_id | first_name | last_name |      last_update
-----+-----+-----+-----
          1 | Penelope   | Guinness  | 2013-05-26 14:47:57.62
```

```
\pset linestyle unicode
```

```
actor_id | first_name | last_name |      last_update
-----+-----+-----+-----
          1 | Penelope   | Guinness  | 2013-05-26 14:47:57.62
```

border

```
\pset border <value>
```

```
\pset border 0
```

```
select NULL, ' ';
```

```
?column? ?column?
```

```
-----
```

```
\pset border 1
```

```
select NULL, ' ';
```

```
?column? | ?column?
```

```
-----+-----
```

```
|
```

border

```
\pset border 2
```

```
select NULL, ' ';
```

```
+-----+-----+
| ?column? | ?column? |
+-----+-----+
|          |          |
+-----+-----+
```

Combine with `linestyle unicode`

```
select NULL, ' ';
```

```
┌──────────┬──────────┐
│ ?column? │ ?column? │
├──────────┴──────────┤
│                │                │
└──────────┬──────────┘
```

border

```
dvdrental=# \pset border 2 \pset linestyle unicode \pset unicode_border_linestyle double \pset unicode_header_linestyle double \pset unicode_column_linestyle single
```

Border style is 2.

Line style is unicode.

Unicode border line style is "double".

Unicode header line style is "double".

Unicode column line style is "single".

```
dvdrental=# select 'row 1' as "ID", 'Alice' as "Name", 1 as "Total" UNION ALL SELECT 'row 2', 'Bob', 4;
```

ID	Name	Total
row 1	Alice	1
row 2	Bob	4

(2 rows)

format

- unaligned, aligned, wrapped, html, asciidoc, latex (uses tabular), latex-longtable, or troff-ms.

```
\pset format unaligned OR \a
```

```
select 'row 1' as "ID", 'Alice' as "Name", 1 as "Total";
```

```
ID|Name|Total
```

```
row 1|Alice|1
```

```
\pset format aligned OR \a
```

```
select 'row 1' as "ID", 'Alice' as "Name", 1 as "Total";
```

```
  ID   | Name   | Total
```

```
-----+-----+-----
```

```
row 1 | Alice |     1
```


format

\pset format aligned

```
ID      | Name
-----+-----
row 1   | Very long name for Alice in Wonderla
nd      | 1
```

\pset format wrapped

```
ID      | Name | Total
-----+-----+-----
row 1   | Very long name for Alice in. | 1
        | . Wonderland |
```

bytea_output

Defaults to hex

```
rd_incoming_data
```

```
-----  
\x3c3f786d6c2076657273696f6e3d22312e302220656e636f64696e673d225554462d38223f3e0a3c436c61696d20786d6c6e7.  
.33d22687474703a2f2f7a6965746f2e636f2e7a612f636c61696d2f7a6d662220786d6c6e733a7873693d22687474703a2f2f77.
```

set bytea_output to escape;

```
rd_incoming_data
```

```
-----  
<?xml version="1.0" encoding="UTF-8"?>\012<Claim xmlns="http://zieto.co.za/claim/zmf" xmlns:xsi="http://.  
./www.w3.org/2001/XMLSchema-instance"\012  xsi:schemaLocation="http://zieto.co.za/claim/zmf file:ZietoCl.
```

expanded

```
\pset expanded off OR \x off
```

```
SELECT 'row 1' AS "ID", 'Alice' AS "Name", 1 AS "Total";
```

```
  ID  | Name  | Total  
-----+-----+-----  
row 1 | Alice |      1
```

```
\pset expanded on OR \x on
```

```
SELECT 'row 1' AS "ID", 'Alice' AS "Name", 1 AS "Total";
```

```
-[ RECORD 1 ]  
ID      | row 1  
Name    | Alice  
Total   | 1
```

```
\pset expanded auto OR \x auto
```

PAGER

```
\setenv PAGER 'pspg -X -s 5 --no-mouse'
```

FC: 14 C: 15..126/162 L:[1 + 0 1/11] 9%

customer_id	store_id	first_name	last_name	email	address_id	activebool	create_date
524	1	Jared	Ely	jared.ely@sakilacustomer.org	530	t	2006-02-14
1	1	Mary	Smith	mary.smith@sakilacustomer.org	5	t	2006-02-14
2	1	Patricia	Johnson	patricia.johnson@sakilacustomer.org	6	t	2006-02-14
3	1	Linda	Williams	linda.williams@sakilacustomer.org	7	t	2006-02-14
4	2	Barbara	Jones	barbara.jones@sakilacustomer.org	8	t	2006-02-14
5	1	Elizabeth	Brown	elizabeth.brown@sakilacustomer.org	9	t	2006-02-14
6	2	Jennifer	Davis	jennifer.davis@sakilacustomer.org	10	t	2006-02-14
7	1	Maria	Miller	maria.miller@sakilacustomer.org	11	t	2006-02-14
8	2	Susan	Wilson	susan.wilson@sakilacustomer.org	12	t	2006-02-14
9	2	Margaret	Moore	margaret.moore@sakilacustomer.org	13	t	2006-02-14

- <https://github.com/okbob/pspg>

Favourites

```
\set <alias-variable-name> 'query'
```

```
\set users 'SELECT DISTINCT username AS "User", datname AS "DB",  
application_name AS "App Name", client_addr AS "IP Address",  
client_hostname AS "Host", backend_start AS "Since" FROM  
pg_stat_activity;'
```

```
dvdrental=# :users
```

User	DB	App Name	IP Address	Host	Since
postgres	dvdrental	psql	127.0.0.1	localhost.localdomain	2018-09-26 00:15:20.210762+02

Conclusion

- Some tips and tricks to enhance the experience with the psql client in your daily tasks as a developer or dba

References / Resources

- PostgreSQL Documentation
 - <https://www.postgresql.org/docs/current/static/app-psql.html>
 - <https://www.postgresql.org/docs/current/static/libpq-pgpass.html>
- ThoughtBot Blog
 - <https://robots.thoughtbot.com/an-explained-psqlrc>
 - <https://robots.thoughtbot.com/improving-the-command-line-postgres-experience>
- Craig Kerstiens Blog
 - <http://www.craigkerstiens.com/2013/02/13/How-I-Work-With-Postgres/>

References / Resources

- Harold Giménez's dotfiles on Github
 - <https://github.com/hgmnz/dotfiles/blob/master/psqlrc>
- Arjan van der Gaag's Blog
 - <http://arjanvandergaag.nl/blog/working-with-postgresql-on-the-command-line.html>
- Digital Ocean Tutorials
 - <https://www.digitalocean.com/community/tutorials/how-to-customize-the-postgresql-prompt-with-psqlrc-on-ubuntu-14-04>

References / Resources

- Pavel Stehule - PSPG
 - <https://github.com/okbob/pspg>
 - <http://okbob.blogspot.cz/2017/07/i-hope-so-every-who-uses-psql-uses-less.html>
- Dimitri Fontaine's Blog
 - <https://tapoueh.org/blog/2017/12/setting-up-psql-the-postgresql-cli/>

References / Resources

- Raghavendra Rao's Blog
 - <http://raghavt.blogspot.co.za/2011/11/psqlrc-file-for-dbas.html>
- Periscope Data's Blog
 - <https://www.periscopedata.com/blog/optimizing-your-psql>
- My dotfiles
 - <https://github.com/nicoschl/dotfiles>

Thank You
Questions?