usql Universal SQL CLI

CONCEPTS

usql is psql's command set for many databases. The scheme of the DSN picks the driver (pg, my, ms, or, sq ...). Which drivers exist depends on the build: check with \drivers.

DSN driver://user:pass@host/db
↓ parses
Prompt SQL plus \commands
↓ connects
Output table, CSV, JSON, HTML
↓ prints

Common schemes

Database	Scheme	Alias
PostgreSQL	postgres	pg
MySQL	mysql	my
SQL Server	sqlserver	ms
Oracle	oracle	or
SQLite3	sqlite3	sq
DuckDB	duckdb	dk
ClickHouse	clickhouse	ch

CONNECT

usql pg://user:pass@host/db
Connect to PostgreSQL

usql my://user:pass@host:3306/db
Connect to MySQL

usql sq://*<path>*.db
SQLite, create if missing

usql *<path>*
Open an existing file or socket

\c *<dsn or name>*
Switch connection in the prompt

\drivers
List drivers built in

RUN AND SCRIPT

usql *<dsn>* -c "*<sql>*"
Run one command and exit

usql *<dsn>* -f *<file>*
Run a file and exit

\i *<file>*
Run a file from the prompt

\g
Run the query buffer (same as ;)

\p
Print the query buffer

\r
Clear the query buffer

RUN AND SCRIPT (cont.)

\e
Edit the buffer in $EDITOR

\begin / \commit / \rollback
Manual transaction

INSPECT THE SCHEMA

\dt[S+] [*<pattern>*]
List tables

\d[S+] [*<name>*]
List relations or describe one

\dn [*<pattern>*]
List schemas

\l[+]
List databases

OUTPUT FORMATS

-C
CSV output

-J
JSON output

-x
Expanded output (one field per line)

-t
Rows only, no headers

\x [on|off|auto]
Toggle expanded output

\G
Run and print vertically

VARIABLES AND SCRIPTING

\set *<name>* *<value>*
Set a script variable

:*<name>* / :'*<name>*' / :"*<name>*"
Interpolate raw / as string / as identifier

\gexec
Run each result value as a statement

\if *<expr>* / \elif / \else / \endif
Conditional blocks in scripts

`*<command>*`
Backtick: use shell output as an argument

VARIABLES AND SCRIPTING (cont.)

\cset *<name>* *<dsn>*
Save a named connection (this session)

\? [options|variables]
Help on commands, flags, variables

help
Short help at the prompt

COPY AND CONFIG

\copy *<src>* *<dst>* *<query>* *<table>*
Copy query results between databases

~/.config/usql/config.yaml
Config file (Linux)

connections: { *<name>*: *<dsn>* }
Named DSNs in config.yaml

init: |
Startup script in config.yaml

usql --version
Show version

usql --help
Show all flags

RECIPES

SQLite to CSV

```
usql sq://app.db -C -c "select * from users" > users.csv
```

JSON for jq

```
usql pg://localhost/app -J -c "select id, name from users" | jq .
```

Copy a table across engines

```
usql -c "\copy pg://localhost/src my://localhost/dst 'select * from t' t"
```

Safe script run

```
usql pg://localhost/app -1 -v id=42 -f fix.sql
```

Named connections

```
# ~/.config/usql/config.yaml
connections:
  prod: pg://app@db.example.com/app
  dev: sq://dev.db

usql prod -c '\dt'
```