> ./initdb -D /tmp/test_db

Zmiana portu na:

```
port=5400
```

> pg_ctl -D /tmp/test_db -l /tmp/logfile start

> vi /etc/pgbouncer/pgbouncer.ini

```
test = host=localhost port=5400 dbname=postgres auth_user=testuser
auth_type = trust
```

W SQL:

> CREATE ROLE testuser WITH LOGIN SUPERUSER PASSWORD 'testuser';

```
postgres=# CREATE ROLE testuser WITH LOGIN SUPERUSER PASSWORD 'testuser';
CREATE ROLE
postgres=#
```

> pgbouncer -d /etc/pgbouncer/pgbouncer.ini

```
postgres@ubuntu-2204:/usr/lib/postgresql/15/bin$ psql -p 6432 test -U testuser
psql (15.6 (Ubuntu 15.6-1.pgdg22.04+1))
Type "help" for help.

test=# ls
test-# ls
test-# ;
ERROR:  syntax error at or near "ls"
LINE 1: ls
        ^
test=#  SELECT current_database();
 current_database
------------------
 postgres
(1 row)

test=#
```

> pgbench -p 5432 -i postgres

```
postgres@ubuntu-2204:/usr/lib/postgresql/15/bin$ pgbench -p 5432 -i postgres
dropping old tables...
NOTICE:  table "pgbench_accounts" does not exist, skipping
NOTICE:  table "pgbench_branches" does not exist, skipping
NOTICE:  table "pgbench_history" does not exist, skipping
NOTICE:  table "pgbench_tellers" does not exist, skipping
creating tables...
generating data (client-side)...
100000 of 100000 tuples (100%) done (elapsed 0.18 s, remaining 0.00 s)
vacuuming...
creating primary keys...
done in 0.63 s (drop tables 0.01 s, create tables 0.07 s, client-side generate 0.23 s, vacuum 0.
14 s, primary keys 0.18 s).
```

Uruchomienie benchmarka bezpośrednio na bazie

> pgbench -p 5400 -c 20 -t 1000 -S -C -f script.sql

```
postgres@ubuntu-2204:~$ pgbench -p 5400 -c 20 -t 1000 -S -C -f script.sql
pgbench (15.6 (Ubuntu 15.6-1.pgdg22.04+1))
starting vacuum...end.
transaction type: multiple scripts
scaling factor: 1
query mode: simple
number of clients: 20
number of threads: 1
maximum number of tries: 1
number of transactions per client: 1000
number of transactions actually processed: 20000/20000
number of failed transactions: 0 (0.000%)
latency average = 81.563 ms
average connection time = 4.064 ms
tps = 245.208209 (including reconnection times)
SQL script 1: <builtin: select only>
 - weight: 1 (targets 50.0% of total)
 - 10039 transactions (50.2% of total, tps = 123.082260)
 - number of failed transactions: 0 (0.000%)
 - latency average = 26.609 ms
 - latency stddev = 18.404 ms
SQL script 2: script.sql
 - weight: 1 (targets 50.0% of total)
 - 9961 transactions (49.8% of total, tps = 122.125948)
 - number of failed transactions: 0 (0.000%)
 - latency average = 26.389 ms
 - latency stddev = 18.525 ms
postgres@ubuntu-2204:~$
```

Uruchomienie benchmarka za pośrednictwem pgbouncera

> pgbench -p 6432 test -c 20 -t 1000 -S -C -f script.sql

```
postgres@ubuntu-2204:~$ pgbench -p 6432 test -c 20 -t 1000 -S -C -f script.sql
pgbench (15.6 (Ubuntu 15.6-1.pgdg22.04+1))
starting vacuum...end.
transaction type: multiple scripts
scaling factor: 1
query mode: simple
number of clients: 20
number of threads: 1
maximum number of tries: 1
number of transactions per client: 1000
number of transactions actually processed: 20000/20000
number of failed transactions: 0 (0.000%)
latency average = 5.777 ms
average connection time = 0.283 ms
tps = 3461.807950 (including reconnection times)
SQL script 1: <builtin: select only>
 - weight: 1 (targets 50.0% of total)
 - 9939 transactions (49.7% of total, tps = 1720.345461)
 - number of failed transactions: 0 (0.000%)
 - latency average = 2.515 ms
 - latency stddev = 1.655 ms
SQL script 2: script.sql
 - weight: 1 (targets 50.0% of total)
 - 10061 transactions (50.3% of total, tps = 1741.462489)
 - number of failed transactions: 0 (0.000%)
 - latency average = 2.481 ms
 - latency stddev = 1.657 ms
postgres@ubuntu-2204:~$
```