

My First Patch – adding new option to pgbench

Lightning Talk @PGConf.dev 2025 Rintaro Ikeda

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About Me

I'm probably the least experienced with PostgreSQL in this room.

- I started using PostgreSQL in 2023.
- I began reading PostgreSQL source code in 2024.

Last week, I submitted my first patch modifying source code!

Suggestion to add --continue-client-on-abort option to pgbench

From: ikedarintarof <ikedarintarof(at)oss(dot)nttdata(dot)com>

To: pgsql-hackers(at)postgresql(dot)org

Subject: Suggestion to add --continue-client-on-abort option to pgbench

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Lists: pgsql-hackers



Problem of pgbench I aim to solve

Currently, a client stops sending requests when its transaction is aborted due to reasons other than serialization failures or deadlocks.

```
$ cat custom_script.sql
CREATE TABLE IF NOT EXISTS test (col1 serial, col2 int unique);
INSERT INTO test (col2) VALUES (random(0, 50000));

$ bin/pgbench -d postgres -f ../custom_script.sql -T 10
[...]
pgbench: error: client 0 script 0 aborted in command 1 query 0: ERROR: duplicate key value violates unique constraint "test_col2_key"
DETAIL: Key (col2)=(28373) already exists.
transaction type: ../custom_script.sql

pgbench stops in a second
```

This issue may result in a lower server load than expected, especially when you specified the number of client, duration time.

Patch I submitted

I proposed "—continue-client-on-error" option.

- when transaction fails, client rollback the transaction and start new one
- the number of clients remains unchanged

```
% bin/pgbench -d postgres -f ../insert to unique column.sql -T 10 --failures-detailed --continue-
client-on-error
transaction type: ../custom script insert.sql
number of transactions actually processed: 33552
number of failed transactions: 21901 (39.495%)
number of serialization failures: 0 (0.000%)
                                                    pgbench keeps applying load
number of deadlock failures: 0 (0.000%)
                                                   for the specified time
number of other failures: 21901 (39.495%)
latency average = 0.180 ms (including failures)
initial connection time = 2.857 ms
tps = 3356.092385 (without initial connection time)
```

If you are interested, give me feedback!