Engineer Data

1,022 migrations behind a schema drift gate

Kept the schema honest across 1,022 migrations with a CI gate that builds the database both ways — a fresh install, and an install plus every migration — and fails when the two disagree.

2025

1,022

migrations held honest by a two-way build

Situation. A schema is described twice in most projects: once by the initial setup that builds it from scratch, and once by the accumulated migrations that grew it. Both are supposed to produce the same database. Nothing checks that they do, so they drift — and the drift is invisible until a fresh environment behaves differently from production, usually at the worst moment.

Task. The two descriptions had to be provably identical, automatically, rather than periodically believed to be.

Action. The database is versioned as 1,022 migrations, numbered from 036 through 1102, and the ordering discipline around them is unglamorous and non-negotiable. What makes it hold is a CI job that builds the database twice on every change: once from the fresh initial schema, once from the initial schema plus every migration replayed in order — and then compares the two. Not just the structure, which is the easy half, but the seeded data too, because a migration that backfills a lookup table wrongly is exactly as damaging as one that forgets a column, and only one of those shows up in a schema diff. Any disagreement fails the build with the difference printed.

Result. A fresh environment and a long-lived one are the same database, and that is checked rather than assumed. The cost lands on whoever writes a migration: it has to work replayed and it has to work from cold, which is more

thought than a quick ALTER usually gets. That is the point — the alternative is finding out during a restore, when the answer matters and there is no time to work it out.

Bring this experience to your project

Use “1,022 migrations behind a schema drift gate” as a starting point for a similar challenge in your organisation. The services behind this work are available for your project. Somebody responsible for the thing the whole company rests on: it is up, it is backed up, and it is not quietly rotting.

Explore our services Get in touch →

Look behind the result

Read the situation, decisions and result in this example. We can discuss which parts transfer to your constraints and which need another approach. 1,022 migrations behind a schema drift gate — 1,022 migrations held honest by a two-way build

Explore our services Get in touch →

Do your migrations still match your schema?

Talk through your project with the engineer responsible for delivery. We agree the scope, price basis and handover in writing before work begins.

Role context: Database Engineer. It draws on Databases, PostgreSQL, Data Governance, DevOps, Reliability & Backups, Migrations & Modernization and Testing & QA. And while you are here, we are rather good at Database Administration (DBA), Database Migration & Modernization, AI Data Readiness and DevOps & CI/CD Automation.

Get in touch Explore our services

One piece of **a longer record** — and it is all on this site.

Every entry is written the same way: the situation, the task, what we did and what changed.

See the whole record

Define the improvement you need

Bring a representative dataset, the questions it must answer and the current bottleneck. We can agree how to measure quality, throughput and recovery.

See what it costs Get in touch →

Do your migrations still match your schema?

Ask about the decisions behind “1,022 migrations behind a schema drift gate”. You will speak with the people who can explain the work and assess your own project.

Explore our services

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Take this page with you

Contact card

Carefully Crafted With Love by D.

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