Engineer Software

Generated the API contract from the database out

Generated the API contract outward from the database — OpenAPI, a 44,076-line typed TypeScript client, 61 mock handlers and the limits the UI enforces — with a guard at every hop that fails on drift.

2025

44,076

lines of typed client, generated from the database

Situation. Frontend and backend move at their own pace, and their assumptions about a request payload can drift apart without anyone noticing. The way you usually find out is a 422 in the browser — after the mismatch has already shipped, which is the most expensive moment to learn about it. Writing the two sides by hand from the same document does not fix it; it just moves the drift to whoever forgot to reread the document.

Task. The two sides had to be generated from one source rather than agreed between two, with every step of the generation checked instead of trusted.

Action. The chain starts at the database and runs outward. The schema and its functions define the shapes; the Go types define the API; Huma emits the OpenAPI description from those; a typed TypeScript client — 44,076 lines of it — is generated from that description; 61 mock handlers are generated alongside it so the frontend's own tests run against the real contract rather than a hand-written fixture; and the limits the UI enforces on a form come from the same place instead of being retyped into a validator. Every hop has a guard. A contract check in CI compares what the frontend sends against what the API expects and fails the build on divergence, with a schema probe underneath it that checks the real shapes rather than a description of them. It deliberately covers where drift likes to hide: optional body fields, where "missing" and "null" get confused, and query-parameter enums, where the two sides can quietly disagree on the allowed values.

Result. A field cannot change on one side only — it fails at the first hop that notices, in a build, minutes after the change. That took out a recurring and genuinely annoying class of bug, the kind invisible in code review that only shows up at runtime. The cost is a generation step in the middle of everything: regenerating is a chore, and the chain is only as trustworthy as its least-guarded link, which is why each hop got one.

Bring this experience to your project

Use “Generated the API contract from the database out” as a starting point for a similar challenge in your organisation. The services behind this work are available for your project. The part users never see: where the data lives, what the rules are, and how other systems are allowed to talk to it.

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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. Generated the API contract from the database out — 44,076 lines of typed client, generated from the database

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Frontend and backend drifting apart?

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: Backend Engineer. It draws on Backend Engineering, APIs & Integration, DevOps, Automation & CI/CD, Reliability & Backups and Testing & QA. And while you are here, we are rather good at Backend & API Development, AI Agent Tools & MCP Servers 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

Describe the workflow, the existing interfaces and the users who need the change. We can define a testable delivery and a handover that lets your team maintain it.

See what it costs Get in touch →

Frontend and backend drifting apart?

Ask about the decisions behind “Generated the API contract from the database out”. You will speak with the people who can explain the work and assess your own project.

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Contact card

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