Engineer Software

Migrated the API to Huma v2 at 100% parity

Migrated the HTTP API from Fiber to Huma v2 — 649 paths and 760 operations — reaching and holding 100% parity between the routes the server registers and the OpenAPI description it publishes.

2025

760

API operations moved, and the description kept true

Situation. The API started life on Fiber, with request validation written out by hand, endpoint by endpoint. That's fine when there are a handful of endpoints. It stops being fine as the surface grows: the hand-rolled validation turns into a maintenance tax, and small inconsistencies creep in because every endpoint's checks are their own little snowflake. And there was no single description of the API's shape anywhere.

Task. The goal was validation coming from the types instead of from hand-written checks, and an actual contract describing the API — without stopping to do a big-bang rewrite.

Action. The HTTP layer moved onto Huma v2, sitting on top of Fiber, so the existing runtime stayed. Each endpoint gets input and output structs, and Huma generates the request validation and response modelling from those types. An OpenAPI description comes out of it for free, which means the documentation tracks the code instead of rotting in a wiki. Everything new got written against Huma and the existing routes migrated over, with exactly two endpoints left on raw Fiber — the WebSocket ones, where you genuinely want the socket and Huma's request/response model doesn't fit. What that has grown into is 649 paths carrying 760 operations, and a check in CI that compares the routes the server actually registers against the ones the OpenAPI description advertises. Parity is 100%, and it stays there because a route that isn't described fails the build.

Result. New endpoints get validation and current documentation without anyone doing extra work for it, and a whole class of request-handling bugs — the “oh, we forgot to check that field here” kind — went away. At 760 operations the description is the only practical way anyone reads the API, so the guarantee that it is complete matters more than it did at fifty. The typed contract made the API both safer to change and easier to hand to someone else, because the types tell you what an endpoint expects.

Bring this experience to your project

Use “Migrated the API to Huma v2 at 100% parity” as a starting point for a similar challenge in your organisation. The services behind this work are available for your project. The shape of a system worked out on paper first, so the parts fit and the cost is known before anyone writes code.

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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. Migrated the API to Huma v2 at 100% parity — 760 API operations moved, and the description kept true

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Want validated, well-documented APIs?

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 Platform Architecture, Backend Engineering, APIs & Integration, Migrations & Modernization, Testing & QA and Documentation. And while you are here, we are rather good at Platform & Solution Architecture, Backend & API Development, AI Agent Tools & MCP Servers and Technical Documentation.

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 →

Want validated, well-documented APIs?

Ask about the decisions behind “Migrated the API to Huma v2 at 100% parity”. You will speak with the people who can explain the work and assess your own project.

Explore our services

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