

Nicolas Dréno

Principal Engineer / API & Platform Architect

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Summary

API and distributed systems engineer who designs the contract and then ships it. I have built an API gateway twice: once in Go for a sovereign cloud provider, including its authentication and authorisation layer, and once in Rust as Barbacane, an open source API and AI gateway where OpenAPI and AsyncAPI specifications are the only configuration. I work with LLM coding agents daily under a method I call intentional engineering: intent written before the code, and blocking gates that verify it. Open to relocation to the San Francisco Bay Area or New York.

Experience

Gluendo

Lead Architect Jan 2026 to Present · France

Consulting architect, currently lead architect on the Magellan programme, an enterprise infrastructure and application platform.

- ▶ Lead architect for an enterprise platform spanning network, datacentre, cloud, container platform, IAM, PKI, observability and cybersecurity.
- ▶ Own the technical strategy and the design documents behind it: ADRs, LLDs and the HLD, reviewed in Git and validated in CI.
- ▶ Designed and bootstrapped the container platform on bare metal: RKE2 and Rancher, GitOps reconciliation with ArgoCD, Cilium and MetalLB.
- ▶ Shipped a Kubernetes operator in Go provisioning S3 tenants, buckets and credentials from custom resources.
- ▶ Introduced a spec-driven method where coding agents run under the same blocking gates as the team.

RKE2 Rancher ArgoCD Cilium OpenTofu NetBox Keycloak OpenBao OpenTelemetry Go Ansible Forgejo

NumSpot

API Architect / Staff Engineer Nov 2023 to Dec 2025 · France

Leading architectural strategies and innovations for a Sovereign Cloud provider, with a focus on open-source solutions and cloud-native services.

- ▶ Defined the API standard and moved the engineering teams to contract-first design, with the OpenAPI specification as the source of truth.
- ▶ Architected the API gateway in Go and led the team that built it, authentication and authorisation included, through design reviews and code review.
- ▶ Set the modular, secure target architecture for cloud-native and PaaS offerings, and contributed to SecNumCloud qualification.
- ▶ Streamlined infrastructure and improved service reliability working across cross-functional teams.

Golang OpenAPI (OAS) Kubernetes Terraform Scalar pb33f Docusaurus GitLab

Back Market

Senior API Architect Sep 2022 to Nov 2023 · France

Shaped the API strategy, architecture, and community practices for a fast-growing e-commerce platform, driving API-first initiatives and modernising the technical ecosystem.

- ▶ Owned the transversal API technical strategy for a fast-growing e-commerce platform, led the API chapter and mentored engineers on API-first design and DDD.

- ▶ Architected a three-layered API strategy across experience, process and system tiers, on a Python and Django codebase with Go services.
- ▶ Modernised the API management and developer portal tooling.

Python Django Golang AWS GCP Node.js GitHub KrakenD Spotlight Backstage Docker Excalidraw Jira

The Warehouse Group

Solutions Architect May 2021 to Jun 2022 · Auckland, NZ

Delivered scalable integration and streaming solutions, modernised API management, and drove DevOps initiatives for a leading retail group.

- ▶ Designed and implemented the core integration solution for a new Master Data Management platform using Confluent Kafka, Azure Kubernetes Service (AKS), and Spring Boot microservices.
- ▶ Enhanced the API management platform with Azure APIM, enforcing OAuth2.0, OpenAPI standards, and robust JSON Schema governance.
- ▶ Championed a decoupled, streaming-first integration framework based on Confluent Cloud Kafka and Infrastructure-as-Code principles.
- ▶ Promoted DevOps best practices by building CI/CD pipelines and contributing to a 'Golden Path' developer platform inspired by Backstage.

Java JavaScript Azure Swagger Backstage Atlassian Json-schema

University of Auckland

Digital Solution Architect Oct 2018 to May 2021 · Auckland, NZ

Modernised digital platforms and integration solutions for New Zealand's leading university, leveraging cloud-native technologies and advanced analytics.

- ▶ Architected a real-time Data Hub using AWS (Kafka, Elasticsearch, ECS, Fargate) to provide a 360° source of truth for university data.
 - ▶ Led the re-architecture of the lecture video delivery platform to serve 85+ petabytes of content globally using AWS S3, CloudFront, and Lambda.
 - ▶ Modernized the IAM platform by integrating AWS Cognito for OAuth2.0/OIDC, and rejuvenated the API management layer with Kong Enterprise.
 - ▶ Designed and promoted 'Integration By Convention' patterns using Kafka and serverless functions, reducing reliance on traditional ESB tools.
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ENGIE B2C

Digital Architect Mar 2016 to Oct 2018 · Paris, France

Led the architecture of digital solutions for customer-facing platforms, driving cloud adoption and innovation for a major energy provider.

- ▶ Designed cloud-native architectures for B2C digital platforms, mobile apps and IoT integrations on AWS.
 - ▶ Led technical evaluations and proofs of concept for API management (Kong, Gravitee, Tyk) and data platforms (Kafka, CockroachDB).
 - ▶ Established a CI/CD factory with Jenkins, Docker, Rancher and Ansible, and coached teams on Scrum, TDD/BDD and DDD.
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French Ministry of Labour

Software Architect and Scrum Master Mar 2014 to Mar 2016 · Bordeaux, France

Architected and implemented the national CPF training platform, sized for 42 million users, while modernising the legacy estate around it.

- ▶ Urbanised an information system of more than ten applications around REST services, with an IAM platform on OpenAM and OpenDJ.

- ▶ Ran the delivery as Scrum Master, with a full CI/CD pipeline on Jenkins, Maven and SonarQube.

Deposits and Consignments Fund

Software Engineer Sep 2009 to Mar 2014 · Bordeaux, France

Built and maintained applications for the largest French public financial institution.

- ▶ Implemented a SOA architecture on JAX-WS, and the JSP and JavaScript interfaces on top of it.
- ▶ Worked with production teams on code quality and performance troubleshooting.

Projects

Barbacane

Founder & CTO Jan 2026 to Present · <https://github.com/barbacane-dev/barbacane>

Building an open source API and bidirectional AI gateway in Rust, where OpenAPI and AsyncAPI specifications are the only configuration.

- ▶ Designed the spec-driven model: specifications are compiled into artifacts and enforced as contracts at runtime, with no proprietary DSL.
- ▶ Built the WebAssembly plugin runtime and its SDK, separating control plane from data plane.

Rust WebAssembly OpenAPI AsyncAPI PostgreSQL

Skills

API & Integration

API design (REST, OpenAPI, AsyncAPI, JSON Schema) API management (Kong, KrakenD, Azure APIM, Gravitee, Tyk) AI gateways
Model Context Protocol (MCP) Event-driven architecture Apache Kafka

Programming & Frameworks

Python (Django) Rust Golang WebAssembly (WASM) Node.js JavaScript/TypeScript

Cloud & DevOps

AWS Azure (AKS, APIM) GCP Kubernetes (RKE2, Rancher) Docker GitOps (ArgoCD) OpenTofu Ansible GitLab CI CI/CD

AI-Augmented Engineering

LLM coding agents (Claude Code) Machine-readable agent conventions and guardrails Spec-driven development
ADR and LLD driven design Context engineering Schema as code On-device inference

Observability & Supply Chain Security

OpenTelemetry Prometheus Grafana SLO and error budgets SBOM (syft)
Keyless signing (cosign) Dependency and licence auditing (cargo-deny)

Education

ENSEIRB-MATMECA

Master's Degree — Network Infrastructure and Software Engineering

Certifications

AWS Solution Architect - Associate · Mar 2024 [View credential ↗](#)

Professional Scrum Developer · Jan 2015 [View credential ↗](#)

Languages

French — Native English — Fluent