

Elliot Morales Solé

Real-Time Video & Streaming Architect · Go · WebRTC,
LL-HLS, DASH, CMAF, DRM · Kubernetes

Almería, Spain · **100% remote**, available to travel

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PROFILE

Twelve years building and operating high-traffic platforms, the last ten on the same live-streaming platform, where I have gone from PHP developer to VP of Engineering (as a contractor to the US parent company since 2022). I design and write the whole infrastructure (on-premises Kubernetes, BGP networking, databases, CI/CD), the video pipeline — WebRTC, LiveKit and all three DRM systems — and the PCI payments software. Previously co-founder and CTO of a hosting and systems company. I code daily in Go, PHP, TypeScript and Python.

~500

concurrent
streams

8-10k

concurrent viewers

20 Gbps

video traffic

5

data centres

EXPERIENCE

Teamsquad

Nov 2022 – present · remote

VP of Engineering. Group of companies that owns amateur.tv and its whitelabels, OnlySafe, VisionTech and Fastevo. Engineering budget of ~\$300k/year; team of up to 4 people reporting to me.

- End-to-end owner of a live-streaming platform with payments, real-time chat and WebRTC/HLS video: from the hardware in 5 data centres to the player.
- Architect and lead developer of **a-stream**: multi-tenant streaming with **0.3–0.8 s latency and full DRM on every stream**, on LiveKit. WHIP/RTMP/SRT ingest, zero-transcode origin→edge cascade, content encrypted **once at the origin** (edge failover without renegotiating the session), recording and clips. From pilot to 25% of streams in three weeks. Currently rewriting the edge in pure Go with a WebSocket transport to the viewer.
- In-house **Widevine** license server in Go wrapping the official C++ SDK through cgo. Certified Widevine Implementation Partner; I have also built PlayReady and FairPlay license servers.
- Production-ready on-premises Kubernetes**: 5 live production k3s clusters of 10 to 20 nodes each, Cilium with BGP/BFD, replicated route reflectors and ECMP for the load balancers, HAProxy as ingress, Ceph RBD, NFS and Longhorn, Proxmox with Terraform and Ansible.
- Percona 5.7 to 8.4 migration in two months** (2026). An in-place upgrade was impossible: an earlier migration had left the date columns in a format 8.4 rejects. Solved by rebuilding the database logically with multi-threaded dump and restore, GTID replication across versions and promotion of a replica to primary, over 6 servers with a rollback path ready. In parallel, adapting the backend to ONLY_FULL_GROUP_BY: 97 classes audited, 44 queries fixed.
- DevEnv**: a Go platform that provisions full per-developer development and pre-production environments on Kubernetes (15+ services per namespace) through REST and MCP, with data seeding and multi-tenant hardening (Cilium, Kyverno, Tetragon, AppArmor).
- CI/CD migration from Jenkins to **GitHub Actions** with ephemeral Kubernetes runners (ARC): backend build from 17 min to 41 s warm, 12,000+ tests across 7 parallel jobs.

SKILLS

Languages

Go (primary, since 2017) · PHP (since 2016)
· Java · Python · C/C++ · TypeScript · Bash · SQL

Video and real time

WebRTC (Pion, SFU, simulcast, ABR) · LiveKit, WHIP, SRT, RTMP, HLS/LL-HLS, DASH, CMAF/fMP4, WebTransport · Codecs H.264, VP8/VP9, AAC, Opus · ffmpeg, GStreamer, VAAPI, Wowza, Nimble, Flussonic · EME/MSE

Kubernetes and infrastructure

k3s, kubescape, Helm, Cilium BGP/BFD, HAProxy, Traefik, nginx, Varnish, Caddy, Ceph, Longhorn, NFS, Proxmox, Terraform, Ansible, WireGuard

Data and messaging

MySQL/Percona (expert) · RabbitMQ (expert) · Redis Sentinel · MongoDB · Elasticsearch · Postgres/Patroni · Aerospike

Cloud

AWS (SAM, Lambda, Aurora, Secrets Manager, S3, CloudFront, IAM) · OVH · Cloudflare · MongoDB Atlas

CI/CD and observability

GitHub Actions + ARC, Jenkins, GitLab CI, Harbor, Docker · Prometheus/Alertmanager, OpenTelemetry, Grafana, Loki, Sentry · on-call

DRM

Widevine (in-house server, certified partner), PlayReady, FairPlay · CENC, PSSH, EME/MSE

Security

PCI DSS SAQ-D · OIDC/OAuth2 · 2FA · WAF · GDPR · age verification

Applied AI

Claude Code, multi-role agents, in-house MCP servers, RAG, cost control

- Design of an **engineering organisation assisted by AI agents** (Claude Code): per-domain agents with explicit roles and contracts, automated code reviewer, support-bug-to-PR orchestrator, spec-driven workflow and cost telemetry.
- PCI DSS SAQ-D** card gateway designed and maintained by me, with an audit renewed three times a year: **over 2,000 transactions a day** across **nine integrated providers**, with 3D Secure, recurring subscriptions and fraud control. Python on AWS (ECS, Lambda, Aurora, Secrets Manager). Multi-provider age verification, GDPR, OIDC/OAuth2, 2FA, WAF.

VTs Media

Apr 2016 – Sep 2022 · Barcelona

PHP Developer → **DevOps and Developer** → **Senior DevOps**. Same platform as Teamsquad, before the company moved to the US.

- Six full production platform migrations: Docker Cloud → **Rancher** (2018) → **Kubernetes** (2019-2020), plus moves between in-house data centres, deployed with Ansible I designed and built.
- hls-edge**: an HLS edge server written entirely in Go, and single-handedly (110 commits, 2020-2021). Active-active high availability on **etcd**, gRPC with mutual TLS, distributed cache, an ffmpeg-based remuxer with a watchdog, early LL-HLS, HTTP/3 and cross-cluster replication.
- Streaming system built entirely in-house software since 2016: **my own Wowza module in Java**, which I started and am the main author of (~8,000 lines: HLS client tokens, audience and bandwidth events published over RabbitMQ, state in Redis, WebRTC from 2017); **C++ services on FFmpeg/libav** for remuxing and transcoding (x264 and NVENC); HLS and LL-HLS, CMAF over WebSockets with in-browser remuxing, SRT, DASH, RTMP tokens, HLS through CloudFront.
- PHP (Yii) backend evolved to DDD/CQRS over RabbitMQ: 1,600+ commits in this period, including gamification, payments, notifications and personal-data encryption.
- Go services since 2017: chat users API, AMQP→FastCGI bridge for PHP consumers, rate limiter, network tooling. Varnish with custom VCL, and a React SSR frontend with a Jenkins pipeline and auth gateway.

Brutal Systems SL

Feb 2014 – Nov 2016 · Barcelona

CTO and co-founder. Systems, cloud and DevOps for third parties: colocation, dedicated servers, VPS, domains and hosting. Key customer: Forocoques.

- Built complete infrastructures from scratch: server selection, racks and data-centre work.
- Control panel for virtual servers** on libvirt/virsh, with **RabbitMQ** as the control bus between the panel and the hypervisor daemons. Streaming projects in C/C++ and DDoS mitigation with BGP (contribution to FastNetMon).
- Custom software development for third parties. Exit through the acquisition of my shares by VTS Media, where I continued my career.

Universitat Politècnica de Catalunya

Jan – Sep 2012 · Castelldefels

Researcher, WikiSat project. Designed the convergent-divergent exhaust nozzle of the second-stage rocket engine of the launcher; validated in static laboratory firings.

CERTIFICATIONS

Certified Widevine Implementation Partner

Google · October 2025 · Modular DRM & License SDK · no. 01398MDLS

Software as a Service I and II

BerkeleyX (edX) · 2013

Foundations of Computer Graphics

BerkeleyX (edX) · 2013

EDUCATION

BSc in Aeronautical Navigation Engineering

Universitat Politècnica de Catalunya · 2011-2016 · coursework completed, final thesis pending · 3 distinctions (matrícula de honor)

MSc in Airport and Aviation Management

ITaèrea Business School · 2012-2013 · programme completed

OPEN SOURCE

Home Assistant

merged PR: fix to the Alexa integration (2021)

FastNetMon

merged PR: next-hop on ExaBGP withdrawals (2016)

LiveKit

in-house fork in production; upstream contribution in preparation

LANGUAGES

Spanish and **Catalan**: native · **English**: full professional proficiency