

François PONS

fpons@aytechnet.fr, +33 6 37 04 01 12, github.com/aytechnet, linkedin.com/in/francoispons
French (native), English (fluent) – Aurillac (Cantal), France

Senior Go Backend Engineer Founder of Aytechnet

Backend engineer designing high-performance Go services, payment APIs and high-availability platforms. Strong experience of payments (Stripe Connect), regulated financial messaging (French e-invoicing: Factur-X, ChorusPro, PA/PDP), ERP / e-commerce integration and server monitoring. Comfortable owning a system end to end, from architecture to operations. Active practitioner of AI-assisted software development. Founder of Aytechnet, co-founder of Velonomad. Available for freelance and consulting engagements.

Technical Skills:

Backend: Golang, PHP, Perl, C/C++, Python, JavaScript

APIs & Integration: REST, GraphQL, Stripe payments, ChorusPro, PA/PDP e-invoicing, ERP and e-commerce connectors

Architecture: Domain-driven design principles, separation of concerns, versioned API contracts, event-oriented processing (journal scheduler, notifications, SSE), idempotent state machines, HA and resilience patterns

Databases: BoltDB (NoSQL), MariaDB, PostgreSQL, MySQL – relational schema design, query optimization

Infrastructure & Observability: bare-metal hosting (Proxmox/LXC/Linux, ISPConfig, systemd), HA architectures, CI/CD, custom monitoring agent and control plane (Linux/Windows probes, signed telemetry, incident lifecycle), audit trails

Frontend: SvelteKit, AngularJS, jQuery

AI-Assisted Engineering:

Daily user of Claude Code for production Go development; iterative prompt design, context management, human-in-the-loop checkpoints. Have also evaluated Google Antigravity, Mistral, and ChatGPT for coding tasks. Hands-on with multi-step agent workflows, verification loops, and judge/verifier patterns to evaluate AI-generated code.

Routine evaluation of AI-generated Go for correctness, idiomaticity, performance, and architectural fit; AI-assisted security passes (stored XSS, filter injection, constant-time comparisons) on a `go vet`-clean codebase.

Professional Experiences:

Since 2008 Aytechnet - Founder, Lead Go Engineer

- Designed, built and **publicly launched DyaPi in 2026** – a Go multi-ERP/e-commerce interconnection SaaS processing financial documents and order flows for SMEs. Sole architect and maintainer; running in production with self-service checkout (Stripe 3DS), subscriptions and prepaid credit metering.
- Operate it as a **Stripe Connect platform**: merchants onboarded through OAuth onto their own connected accounts, **direct charges with application fees** as the platform's commission – merchants stay merchant of record and carry their own disputes, and the platform never holds third-party funds, keeping it outside regulated payment-services scope by design.
- Shipped French e-invoicing end to end: **hybrid Factur-X generation** (EN 16931, PDF/A-3 + CII XML) validated at **zero error and zero warning** against the official XSD and EN 16931 schematron suites, **ChorusPro submission in production** (regulated messaging, 14-state invoice lifecycle, append-only audit trail), and **outbound transmission through an accredited PA/PDP platform** validated end to end in July 2026 – with a dated emission policy for the 2027 obligation, a **directory check before every emission** (held invoices re-checked daily, single alert, 180-day follow-up), lifecycle statuses read back from the platform, and detection of invoices deposited manually by the merchant so nothing is ever emitted twice.
- Delivered the **inbound reception pipeline ahead of the 1 September 2026 statutory deadline** and operate it under the mandate since: polling, deduplication, EN 16931 decoding, a consistency gate that parks any invoice deviating by more than one cent rather than silently adjusting it, idempotent per-invoice import jobs, a **human-in-the-loop transfer wizard** that creates the supplier draft in the ERP with the PDF attached and learns per-tenant supplier/product associations (automatic from the second invoice), and **lifecycle statuses pushed back to the supplier** when the draft is validated in the ERP.
- Built the **usage-metering and billing chain**: immutable credit lots with a derived balance (no stored counter), idempotent reconciliation of grants, corrections and credit notes from the billing ERP driven by notifications, scheduled e-mail reports and all deferred work on a single journal scheduler (no external cron), and event subscriptions so dependent tenants are woken on ERP changes.
- Hardened the platform for public exposure: server-driven **secret rotation** with two slots and silent client switch-over, signed self-expiring links everywhere (claims, documents, double opt-in in two steps), anti-robot form guard without third-party captcha, cookie-less audience measurement, **no third-party asset on any page** (self-hosted fonts and bundled JS) to keep the privacy policy honest.
- Published **DyaPiConnect**, a free open Dolibarr module (v1.0.2, Dolibarr $\geq$ 18.0), listed on the official Dolibarr wiki, plus the public site: documentation, pricing, five SEO articles and a Chorus Pro guide written from the lived workflow.
- Designed and shipped in 2026 a **supervision platform in Go**: **aymond** agent for Linux and Windows (Apache, PHP-FPM over FastCGI, MariaDB, disk, memory pressure, TLS, DNS, Veeam and ESET probes; an *alive / saturated / progressing* triad that detects internal deadlocks plain HTTP checks miss; hysteresis; automated FPM remediation), **aywatchd** control plane (Ed25519 machine enrolment, signed reports, dead-man's switch, external checks, incidents with acknowledgements and history, thresholds pushed to agents), and the **aytechnet.fr customer portal**: live SSE views, e-mail alerts, customer teams and roles, billed services and hosting capacity read from the ERP through DyaPi's API. Beta programme opened in October 2026; the agent is headed for open source.
- Delivered against a **publicly announced date** committed to the Dolibarr community (wiki and forum), keeping SME clients informed and working with an accredited PDP operator around a regulatory deadline none of us controlled.

Golang, JavaScript, ERP, API, SSE, Ed25519, WordPress, PrestaShop, Shopify, Stripe, ChorusPro, Proxmox, systemd, PHP, Perl, Linux, Windows, C.

Since 2025 Velonomad - Co-founder, Software Architect, Backend Development (*part-time since 2026*)

- Designed and architected the backend for an online bike reservation platform with domain-driven separation of concerns, real-time inventory, and Stripe payment processing.
- Developed scalable Go APIs with versioned contracts for automated order and invoice generation, with idempotency and reconciliation flows.
- Led frontend-backend integration (SvelteKit) and collaborated cross-functionally on end-to-end feature delivery, with a quality-driven approach to testing and reviews.
- Now a reduced, advisory engagement: architecture guidance and occasional backend maintenance.

Golang, ERP, Proxmox, Stripe, API, SvelteKit, Strapi.

Since 2018 Gîtes du Cayla - Co-founder, 4-star rated holiday cottages, capacity for 20 people.

2003 to 2006 Software Architect, Technical Expert for the French Finance Ministry (DGI – Direction Générale des Impôts).

- Technical expert for the Copernic program (tax administration modernization), training teams in Perl and Linux.
- Designed and implemented a web interface for building Java software based on a reference machine.

Linux, HP-UX, rpm, Perl, SOAP, J2EE, Jboss, Tomcat.

1999 to 2003 MandrakeSoft (Mandrake then Mandriva Linux) - Core-Team Developer, Project Leader

- Led the development of DrakX (Linux installation program) and urpmi (package manager), used by millions of users worldwide.
- Optimized system performance and automated package management.
- Collaborated with open-source communities to integrate and patch GPL software; mentored contributors.

Linux, Perl, C, Asm i386, urpmi, rpm, kernel, lilo, syslinux.

1998 to 1999 Junior Consultant for Altran, mission at Alcatel-CIT/ALMAP

- Developed C++ modules for network management based on HP OpenView and Ilog Views.
- Integrated a Perl 5 interpreter into the main software, improving user customization and i18n support.

C++, Ilog Views, UML, HP OVW, Perl, HP-UX, Solaris, WinNT.

1996 to 1997 Software Engineer, R&D Thesis at IBM France

- Developed a portable lexicographical station in C++ for text processing, improving transducer technology performance and integration.

VisualAge C++, AIX, Ilog Views, WinNT, OS/2.

Open-Source Projects:

decimal github.com/aytechnet/decimal – high-performance fixed-point decimal library in Go, designed for financial computations.

- **5x–40x** faster than [shopspring/decimal](#) on fractional arithmetic, with zero-allocation hot paths verified by benchmarks; listed in [awesome-go](#).
- Compact varint binary wire format (1–10 bytes) with v2 extension opcodes for typed Weight values, suited to event-driven messaging.
- Public API mirrors [shopspring/decimal](#) for drop-in compatibility.

Golang, low-level bit manipulation, performance engineering, library design.

fsync github.com/aytechnet/fsync – high-performance generic concurrent containers for Go (MIT): Map, Set, Store, Bitmap, MPMC Queue, drop-in replacements for `sync.Map` and `map + mutex`.

- Lock-free reads (seqlock), zero-allocation hot paths, `Lock` returning a stable `*V` with no per-entry allocation. Born from DyaPi's caches (licences, sessions); CI, coverage and lint published.

Golang, generics, atomics, lock-free data structures, performance engineering.

Education:

1996 Engineering degree, E.N.S.I.I.E. (ex-IIE, Concours Centrale-Supélec). Computer science, networking and applied mathematics.

1991 to 1993 Two-year intensive program preparing for the national competitive exam for entry to engineering schools in mathematics and physics (Math Sup, Math Spé).

1991 A-levels in mathematics and physics: Baccalauréat C.

Miscellaneous:

Open-source contributor and UNIX/Linux enthusiast since 1994.

Badminton, hiking, running, mountain biking, board games (strategy, problem solving, collaboration).