

Marcello Barnaba



Production Engineer · Rome, Italy · vjt@openssl.it

[GitHub](#) · [LinkedIn](#) · [Twitter](#) · [Blog](#)

Profile

Tech Lead with 26+ years of experience delivering resilient distributed systems, leading cross-functional teams, and architecting critical infrastructure at scale. Passionate generalist, mentor, and open source contributor.

Core skills: Distributed Systems · Tech Leadership · CI/CD · Rust, Python · Linux Internals · Infrastructure Automation · Incident Response · Security Hardening · Cross-functional Collaboration

Experience

Meta Platforms — Production Engineer

December 2021 – Present · 4+ years

Bootstrap / MetalOS

2023 – Present

I work on a bare-metal OS powering millions of servers globally. Part of the Datacenter Automation org; our team owns the lower OS layers, the net-booting infrastructure and the provisioning automation.

- Halved re-provisioning cycles across the fleet, reducing downtime and hardware churn
- Designed and rolled out hardware identification mechanisms for early OS imaging
- Implemented sandboxing for hermetic configuration generators
- Led deprecation of legacy net-booting systems, migrating to newer building blocks
- Negotiated technical trade-offs across multiple teams for secure server lifecycle automation

Unprovisioning

2021 – 2023

Asset decommissioning and secure erasure before hardware exits company premises.

- Led deprecation and migration off legacy unprovisioning systems
- Developed and rolled out next-generation unprovisioning workflows
- Worked cross-functionally with DC ops to ensure secure erasure and physical destruction
- Mentored junior engineers across multiple time zones

IFAD (United Nations)

January 2011 – November 2021 · 10+ years

Tech Lead

February 2016 – November 2021 · 5+ years

Led the technical side of a critical financial system implementing electronic disbursement of IFAD financings to borrower countries.

- Reviewed technical proposals, authored documentation, interviewed and hired engineers

- Acted as liaison between internal stakeholders, external vendors, and suppliers
- Led full infrastructure automation ([example](#)), persuaded its re-use across existing line-of-business applications
- Oversaw [security design](#), delegated vulnerability assessments and hardening

Software Engineer & Sysadmin

January 2011 – January 2016 · 5 years

- Architected and developed multiple line-of-business applications: [DMS](#), CRMs, BPM workflows, [authorization](#), webcasting
- Built [temporal versioning](#) into the data layer, enabling full audit history across financial applications
- Built, secured and maintained dev/staging/prod environments for 30+ Ruby applications
- Established shared framework libraries, releasing as open source where possible ([data-confirm-modal](#), [ChronoModel](#), [Eaco](#))
- Set up DNS, routing, software distribution, monitoring and alerting infrastructure

Mind2Mind — Web Developer & Sysadmin

September 2009 – December 2010

Panmind was a collaborative platform for sharing and organizing knowledge, built with Ruby, Javascript and Erlang. Refactored and architected both front-end and back-end. Built a [SPA framework](#), [event-driven analytics pipeline](#), and [cross-language session system](#) that anticipated patterns adopted industry-wide years later. Designed and secured the production environment. Evangelised open source through component extraction and [conference presentations](#).

Lime5 — Web Developer & Sysadmin

February 2008 – November 2009

Designed and implemented multiple projects: tourism platform (Visita CSA), social music platform ([Myousica](#)) with audio streaming on Engine Yard, enterprise knowledge-sharing system (Agorà).

Softmedia — Web Developer & Sysadmin

December 1999 – December 2007 · 8 years

First professional role. Built and maintained UNIX/Windows server infrastructure, site-to-site VPNs, mail systems (Exchange, Zimbra, Postfix), and web applications in PHP and Ruby on Rails.

Open Source & Community

Recent projects — github.com/vjt

- **ha-verisure-italy** & **ha-eisenberg** — Home Assistant integrations: [Verisure Italy security system](#) (GraphQL client, Pydantic-typed, 165 tests, pyright strict) and [Arlo cameras](#) reverse-engineered into a clean local-first integration.
- **openwrt-glinet-x3000** & **openwrt-builder** — [Vanilla OpenWrt 25.12 image for the GL-X3000](#) with a [throwaway-VM cross-arch package build pipeline](#) feeding it.
- **openwrt-ha-presence** — [WiFi-based room presence detection](#) for Home Assistant via OpenWrt and MQTT; paired with a [mesh dethrash analyzer](#).
- **quectel-5g-tools** — [Parser and monitor for Quectel 5G modems](#) cell information.

- **dfsroot-geli-dropbear** — FreeBSD initial RAM disk for [remote GELI-encrypted ZFS unlock](#) over SSH; [full init/PAM/reroot environment](#), not a shell hack.

Community roots

- **Antifork.ORG** (2007–present) — Maintaining the legacy infrastructure and [code](#) of this group of hackers/friends from the early 2000s.
- **Azzurra IRC Network** (2002–2005) — [Forked the Bahamut IRCd](#) for Italy's largest IRC network: IPv6, SSL, hostname cloaking. Added SSL to the irssi client. [Wrote IRC services from scratch](#). Twenty years later, [reviving IRC for 2026 with grappa-irc](#) — a BNC + PWA reboot, [now in active development on Elixir/BEAM](#).

Quotes I Live By

- *Keep looking up* — Neil DeGrasse Tyson
- *Computer science is no more about computers than astronomy is about telescopes* — Dijkstra
- *A name indicates what we seek. An address indicates where it is. A route indicates how we get there* — Jon Postel
- *Be liberal in what you accept, be conservative in what you send* — Jon Postel



M27 (Dumbbell) Planetary Nebula · Photo by me

The real sysadmin — and his cars are servers.

sindro.me · April 2026