

# Liviu Alexoiu



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[imeanit.nl](http://imeanit.nl) · [hexie.dev](http://hexie.dev) · [github.com/hexiejexie](https://github.com/hexiejexie) · [linkedin.com/in/alexoiuliviu](https://linkedin.com/in/alexoiuliviu)

Infrastructure engineer with six years of cross-disciplinary experience spanning enterprise server hardware, sole-operator IT for a 300-endpoint facility, and production-grade self-hosted infrastructure. Currently running an independent consultancy alongside active job search, with published engineering case studies and a 40+ service homelab as a continuously operated reference environment. Strong on Linux, Docker, networking, and observability; actively migrating to Kubernetes. Comfortable owning infrastructure end-to-end or integrating into an existing team.

## WORK EXPERIENCE

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### Freelance Infrastructure and DevOps Engineer

Jun 2024 - Present

*I mean IT (ZZP, parallel to employment)*

Enschede, NL

- Established independent consultancy delivering packaged infrastructure engagements to SMB clients across the Netherlands - infrastructure audits, network automation (Ansible), and monitoring stack setup (Prometheus / Grafana / Loki).
- Published engineering case studies at [imeanit.nl/cases](http://imeanit.nl/cases) demonstrating hands-on work with Docker Compose standardization, Authentik SSO / forward auth, Prometheus observability, and self-hosted production infrastructure.
- Operating the business end-to-end: legal registration (KvK), financial scaffolding, client communication, scoping, proposals, and delivery.

### Failure Analysis Engineer

Nov 2023 - Sep 2024

*ZT Systems*

Almelo, NL · Hybrid

- **Authored and curated roughly 90% of the department's failure analysis documentation**, building the Confluence knowledge base from **zero** into the reference source for the team's diagnostic procedures, fix validation steps, and runbooks for recurring fault patterns.
- Trained QC personnel on diagnostic procedures and tooling; identified and proposed automation opportunities to reduce manual analysis overhead.
- Conducted root cause analysis on server hardware failures during development and NPI, working cross-functionally with RDT teams to drive solutions.
- Investigated kernel panics, PCIe errors, BIOS / SMBIOS anomalies, and initrd / ramfs failures; decoded DMESG and SEL logs to isolate root causes at scale.

### Quality Control Engineer

Apr 2021 - Oct 2023

*ZT Systems*

Almelo, NL · On-site

- **Progressed from test engineer to staff trainer to line lead within the QC department, then promoted to Failure Analysis Engineer** based on diagnostic performance - one of a small number of QC staff to move into an engineering role.
- End-of-line testing of server rack systems prior to customer shipment: hardware inspection, cabling integrity, component replacement, and software validation.
- Validated BMC, BIOS, FPGA, SPI flash, and network switch configurations across Cisco, Arista, and Mellanox hardware; decoded SEL logs to confirm system health.
- Ran proprietary test suites on RedHat (RHEL) / CentOS / Debian / Ubuntu systems via Linux terminal, logged findings in JIRA and compiled quality reports for QC management.

### Systems and Network Engineer

Sep 2019 - Apr 2021

*DAF ROM (aiCAD) - IT Department*

Romania · Hybrid

- **Sole on-site IT engineer for a 300-endpoint medical facility** - solely responsible for all hardware, software, networking, and physical infrastructure across the building.
- Administered Windows Server 2008 / 2016, Active Directory, Group Policy, and DHCP; managed Linux systems and Cisco switch / router configuration.
- Deployed and maintained IP camera systems and structured cabling; trained incoming colleagues and collaborated with accounting and procurement on equipment contracts.

## SELF-HOSTED PRODUCTION INFRASTRUCTURE

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### Homelab - 40+ service production stack

2023 – Present

[github.com/hexiejexie/homelab](https://github.com/hexiejexie/homelab)

Single-node Proxmox VE host (Ryzen 5, 40GB RAM, ZFS on NVMe, 18TB HDD pool) running 40+ containerized services across a Docker LXC and a CloudPanel LXC, continuously operated in production for 2+ years through multiple full stack migrations.

- **Orchestration and deployment:** Standardized all 40 services on a Docker Compose template pattern using YAML anchors for shared Traefik, Homepage, and Uptime Kuma labels. Reduced new-service onboarding from ~15 minutes to ~3 minutes and eliminated config drift.
- **Observability:** Prometheus (node\_exporter on Proxmox host, cAdvisor, Traefik, AdGuard exporter), Grafana with community dashboards, Loki + Promtail for centralized container logs, Uptime Kuma + AutoKuma for external health checks auto discovered from Docker labels, Discord webhook alerting.
- **Identity and access:** Authentik SSO (forward auth and native OIDC) protecting 30+ services via Traefik middleware, with domain-level session cookies and a custom HostRegexp outpost router for multi-subdomain callback handling.
- **Networking:** Traefik v3 with Cloudflare DNS-01 TLS, AdGuard DNS with subdomain rewrites, WireGuard VPN, MikroTik router with VLANs and dstnat rules, NAT'd camera segment with Frigate NVR.
- **Kubernetes migration (in progress):** Six-phase plan to migrate the full stack to k3s with GitOps via FluxCD, Helm charts, and persistent storage - explicit preparation for a Kubernetes-native production engineering role.

## SELECTED ENGINEERING WRITING

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Published at [imeanit.nl/cases](https://imeanit.nl/cases) - engineering case studies with technical detail, design decisions, and reflections.

- *Standardizing 40 self-hosted services with YAML anchors* - Docker Compose template pattern and the interpolation gotcha
- *Rebuilding a homelab monitoring stack from scratch* - Prometheus / Grafana / Loki design decisions and dashboard philosophy
- *Putting single sign-on in front of 30 self-hosted services* - Authentik + Traefik forward auth, the three modes, the bugs
- *Why I moved my security camera off jsmpeg* - Frigate NVR, WebRTC vs MSE, and when "best" isn't best
- *Hosting my own business website on a server* - Self-hosted infrastructure trade-offs and when to recommend them

## EDUCATION

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### Bachelor's in IT Administration and Management

2018 – 2021

*Romanian-American University · Bucharest, Romania*

### Romanian Baccalaureate - Mathematics and Computer Science (Bilingual EN)

2014 – 2018

*Callatis Theoretical High School*

## SKILLS

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**Infrastructure and Platform:** Linux (Arch, Ubuntu, Debian, CentOS, RHEL), Proxmox VE, Docker, Docker Compose, Kubernetes (k3s in progress), LXC, VMware, Hyper-V

**Networking:** Traefik, nginx, WireGuard, OpenVPN, OPNsense, pfSense, OpenWRT, MikroTik, Cisco, Arista, Mellanox, DNS/DHCP, VLANs, NAT, reverse proxy architectures

**Observability:** Prometheus, Grafana, Loki, Promtail (now Alloy), node\_exporter, cAdvisor, Uptime Kuma, Scrutiny, Discord / webhook alerting

**Identity and Auth:** Authentik (SSO, OIDC, forward auth), OAuth 2.0, OIDC, SAML fundamentals, LDAP basics, Active Directory, Group Policy

**Automation and IaC:** Ansible, Bash, Python, Git, GitHub Actions, CI/CD pipelines, Helm (learning), Terraform

**Scripting and Programming:** Bash, Python, Node.js, Perl

**Hardware and Diagnostics:** Server rack assembly and testing, BMC, BIOS, FPGA, HIPOT testing, SEL log decoding, PCIe diagnostics, DMESG analysis

**Tools and Workflow:** Git, GitHub Actions, JIRA, Confluence, Agile, Postman

**Languages:** English (native), Romanian (native), Dutch (A2, actively improving)

**Certifications (planned Q2 / Q3 2026):** LPIC-1, HashiCorp Terraform Associate.

**Interests:** Homelabbing, Guitar & Piano, Hiking, Photography, Automotive, Cooking, PC Gaming, Reading