

Karlken Alvarez.

SysAdmin & DevOps Engineer – Consultant

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ABOUT ME

I am a dynamic and versatile professional with a strong ability to adapt quickly to new challenges and technologies. I learn fast and work with determination to achieve goals, staying organized and calm even under pressure.

Throughout my career I have implemented new infrastructures and technologies from the ground up, completing complex projects in a short time while ensuring scalable, secure and efficient solutions. Today I run production Docker Swarm clusters, replicated PostgreSQL databases, monitoring and network security for companies and professional firms. I stand out for my proactive mindset, strong problem-solving skills and constant focus on quality and innovation.

Available for project-based collaborations and DevOps & Cloud consulting.

WORK EXPERIENCE

SysAdmin | DevOps Engineer – Consultant

04/2024 – present

Zerouno srl – Milan, Italy

DevOps and containers

- Designed and manage multi-site **Docker Swarm** clusters for production, test and development environments, deployed through **Portainer** (including its API) and Docker Compose.
- Infrastructure configuration versioned in **GitLab** with a **GitOps** approach: automatic sync to the nodes, secrets kept out of the code, merge requests and a private image registry.
- **Traefik v3** as reverse proxy: routing, middlewares, Let's Encrypt certificates via Cloudflare DNS, access logs stripped of sensitive data.
- Rolling cluster upgrades (Docker Engine, Traefik) node by node, with drain, checks and a rollback plan; migrated production volumes from NFS storage to local node storage.

Databases and backups

- **PostgreSQL**: streaming replicas with replication slots on a dedicated node, pg_basebackup, WAL archiving and retention limits, connection pooling with **PgBouncer**.
- Built internal tools: a web app for PostgreSQL backups to **Wasabi S3** (Python, FastAPI) and a dashboard monitoring replicas and backups.
- Automated Docker volume backups to Wasabi S3 with result checks, retention and **Telegram** notifications.

Monitoring and observability

- **Grafana, Prometheus, Loki, Alertmanager, Alloy, cAdvisor** stack with Telegram alerts; **Uptime Kuma** for service availability.
- **FortiGate** firewall monitoring: Prometheus exporters, syslog centralized in Loki, Grafana dashboards and alerts on VPN tunnels and certificate expiry.

Systems, network and security

- **FortiGate** firewalls for company sites and clients: access policies, SSL and IPsec VPNs (site-to-site and dial-up), network segmentation, DNS, license renewals.
- **Microsoft 365**: client tenant and license management, account security (MFA, DKIM), analysis of email compromise incidents.
- Linux and Windows servers, **Active Directory** and Group Policy, VMware ESXi, QNAP and Synology NAS, backups with Veeam and Nakivo.
- Web hosting on **Plesk**, domains and SSL/TLS certificates, Nginx and Apache2 hardening, Tomcat configuration.
- Network infrastructure (racks, switches, VLANs, cabling) and development of a web app mapping switches, ports and VLANs.

Applications and support

- Deployment and maintenance of containerized client applications: **Odoo** (ERP), Java/Spring applications, **Keycloak** for Single Sign-On.
- IT support for clients in several sectors (professional firms, logistics, distribution, manufacturing, construction) and technical documentation of procedures and automations.

Technical Project Manager – Full Stack Developer – DevOps – IT Manager

10/2021 – 03/2024

Expandi Group – Milan, Italy

- Analyzed and planned projects, defining the technical roadmap and priorities.
- Coordinated and supported developers across front-end and back-end, fostering collaboration between teams.
- Built and maintained internal Java web applications and managed the Salesforce CRM.

- Managed and integrated Docker, Jenkins and continuous integration processes.
- Maintained and updated Linux servers and IT infrastructure, ensuring stability and security.
- Supervised testing and solved complex issues, improving release times and software quality.

Full Stack Developer
09/2019 – 10/2021

Expandi Group – Milan, Italy

- Developed and tested internal Java web applications (Spring, Thymeleaf, HTML, CSS, JavaScript).
- Administered and customized the Salesforce CRM, integrating business processes.
- Provided technical support and maintenance of internal tools to ensure business continuity.

CRM & Tech Specialist
03/2019 – 09/2019

Expandi Group – Milan, Italy

- Managed and optimized the Salesforce CRM platform for internal operations.
- Provided technical support and resolved issues with internal tools and applications.
- Worked with developers to integrate new features according to business needs.

PERSONAL PROJECTS – HOMELAB AND SELF-HOSTING

- Multi-node homelab (x86 server, Raspberry Pi 5, VPS) managed with **Portainer**; GitOps deployments with **GitHub Actions**, GitHub Container Registry and webhooks.
- Zero-trust access with **Pangolin** (reverse proxy and tunnels) and **Keycloak** Single Sign-On (OIDC) for every exposed application.
- Primary **PostgreSQL** with a streaming replica on a second machine; encrypted **restic** backups to a NAS with an offsite copy on Cloudflare R2, regularly verified.
- **Odoo 18** for electronic invoicing, personal Node.js web applications, Linux automations with systemd and hardening of exposed services.

SKILLS

Containers and orchestration	Docker (multi-stage, Compose), Docker Swarm, Portainer, Kubernetes (basic)
CI/CD and GitOps	Git (Git flow, branching, pull/merge requests), GitLab CI, GitHub Actions, Jenkins, image registries
Reverse proxy and access	Traefik v3 (middlewares, TLS, Let's Encrypt, failover), Nginx, Pangolin, Keycloak (SSO/OIDC)
Monitoring	Grafana, Prometheus, Loki, Alertmanager, cAdvisor, Alloy/Promtail, Dozzle, Uptime Kuma; centralized logs with retention policies
Databases	PostgreSQL (schema design, advanced queries, streaming replication, replication slots, WAL archiving, PgBouncer), MySQL/MariaDB (basic)
Backup and storage	Wasabi S3, Cloudflare R2, restic, Veeam, Nakivo, QNAP, Synology
Network and security	FortiGate (SSL/IPsec VPN, routing, HA), WireGuard, Tailscale, DNS (Cloudflare, AWS Route 53), SSL/TLS certificates
Systems	Linux (services, networking, users and permissions, systemd), Windows Server, Active Directory, Microsoft 365, VMware ESXi, Proxmox (basic), Plesk, Apache2, Tomcat
Automation	Bash, Python, cron and systemd timers, fail-safe deployment strategies
Development	Java (Spring Boot), Python (FastAPI), JavaScript (Node/ES6), HTML/CSS, Thymeleaf, Apex (Salesforce), REST APIs
Project management	Jira, ClickUp, Bitbucket; Agile/Scrum, sprint planning, roadmaps, technical documentation
Other	Salesforce CRM, Odoo, Talend ETL, Visual Studio Code, Eclipse, FileZilla, MobaXTerm / PuTTY

EDUCATION AND TRAINING

Technical high school diploma in Computer Science
ITIS E. Torricelli – Milan, Italy
06/2018

LANGUAGES

Italian – native
English – listening B2, reading B2, writing B2, spoken production B1, spoken interaction B1

I authorize the processing of the personal data contained in this CV pursuant to Italian Legislative Decree no. 196 of 30 June 2003 and Article 13 of Regulation (EU) 2016/679 (GDPR).