

# ZAKARIA KEBAIRIA

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## EDUCATION

### Higher School of Computer Science o8 May 1945 - Sidi Bel Abbes

Sep 2021

Master's & Engineering Degree in Computer Science (Supervised by [Pr. Rahmoun Abdellatif](#))

## EXPERIENCE

### Emploitic

*IT Manager*

May 2023 – Present

*Draria, Algiers*

- Modernized Emploitic's infrastructure by migrating legacy OVH/IONOS systems to a redesigned Hetzner-based architecture (Cloud + Bare-metal) with private vSwitch networks, VLANs, and Cloudflare DNS/WAF.
- Reduced infrastructure costs by 60% while improving overall performance, security, and maintainability.
- Built internal DevOps tooling in Golang (e.g., `baccli`) and standardized provisioning using Ansible roles and Terraform modules.
- Migrated GitLab 14.9.2 → 16.8.2 (LXC → Docker) for 160+ users and 288+ projects, with optimized CI/CD and automated backup routines.
- Cut backup/restore time by 78% by replacing rsync workflows with NFS-over-VPN pipelines and automated and managed backups for PostgreSQL, MongoDB, MySQL, Redis, and ArangoDB.
- Refactored CI/CD pipelines, significantly reducing integration and deployment times through advanced GitLab features.
- Built a unified observability stack (Prometheus, Grafana Alloy, Loki, Grafana) for node, application, VPN, DNS, traces, and container monitoring with structured alerting.
- Standardized Linux server configurations and resolved partitioning, naming, and compliance issues, improving system reliability.
- Implemented multi-layer security (Hetzner firewalls, `firewalld`, SSH hardening, SELinux, Fail2ban, internal PKI).
- Designing the company's long-term platform roadmap, including Kubernetes adoption and Azure migration planned for 2026.

### Emploitic

*IT Manager*

May 2023 – Present

*Draria, Algiers*

- Modernized Emploitic's infrastructure by migrating from legacy OVH/IONOS to a redesigned Hetzner architecture (Cloud + Bare-metal) with vSwitch private networking, VLANs, and Cloudflare WAF/DNS, reducing costs by 60% while improving reliability and security.
- Built internal DevOps tooling in Golang (e.g., `baccli`) and standardized provisioning using Terraform and Ansible; modernized Docker-based CI/CD pipelines and upgraded GitLab 14.9.2 → 16.8.2 for 160+ users and 288+ projects.
- Implemented unified observability (Prometheus, Grafana Alloy, Loki, Tempo, Grafana) and redesigned backup/restore workflows (NFS-over-VPN), cutting recovery times by 78% across PostgreSQL, MongoDB, MySQL, Redis, and ArangoDB.
- Strengthened platform security with Hetzner firewalls, `firewalld`, SELinux, Fail2ban, SSH hardening, and internal PKI, while defining the long-term platform roadmap including Kubernetes adoption and upcoming Azure migration (2026).

### Contractor

*System/Cloud Engineer*

Jan 2023 – Apr 2023

*Remote*

- Built Packer images for QEMU, AWS, and VMware and automated workflows with Bash for Namla.

- Managed AWS infrastructure using Terraform (VPCs, networking, EC2) and developed 50+ AppArmor profiles with systemd services to improve runtime security.
- Contributed to the design of scalable cloud architectures aligned with business needs.
- Deployed a high-availability Kubernetes cluster (kubeadm, HAProxy, Keepalived) for APCS (Algerian Port Community System).
- Wrote 10+ Ansible playbooks and containerized a monolithic application into microservices using Dockerfiles and Kubernetes.
- Delivered technical guidance and presentations to the APCS team on the technologies and architecture used.

#### **LabLabee**

*DevOps Engineer*

Oct 2022 – Jan 2023

Oran, Algeria

- Deployed OpenStack multiple times for a Network Functions Virtualization (NFV) project using OpenStack Tacker.
- Created shell scripts to automate deployment, monitoring, and user-experience-related tasks.
- Troubleshoot issues and provided technical support to users, ensuring timely and efficient incident resolution.
- Collaborated with engineers in team meetings to ensure project goals were met on time and within budget.

#### **Umaitek**

*System Engineer*

Feb 2022 – Oct 2022

Algiers, Algeria

- Integrated multiple projects at Umaitek involving a variety of IT solutions and platforms.
- Migrated 1k+ user accounts to Zimbra mail platforms using Python and Bash scripts.
- Installed, configured, upgraded, and enhanced Linux servers, virtualization platforms (RHV, Proxmox), cloud environments (OpenStack), containerized infrastructures (Kubernetes, Docker, Podman, LXD), and storage solutions (GlusterFS, Ceph, NFS, iSCSI).
- Resolved client tickets, provided architectural guidance to software development for resiliency and efficiency, troubleshoot hosted services, and managed technical incidents and internal communication.

#### **LABRI Research Center ESI-SBA**

6 months

*Real-Time Web-Based Suspicious Behavior Detection System in a Fog-Edge Distributed Architecture* Algiers, Algeria

- Designed, implemented, and deployed a fully automated multi-layer infrastructure for a real-time suspicious behavior detection platform using Deep Learning.
- Used Edge, Fog, and Cloud computing paradigms to build a distributed infrastructure.
- Worked across DevOps phases including design, code, build, test, and monitoring of the platform.

#### **Instructor**

2018 – 2021

- RedHat Certified System Administrator course (*AlphaBit Club – ESI-SBA*) 2018 – 2019
- RedHat Certified System Administrator course (*Ingeniums Club – ESI-SBA*) 2019 – 2020
- RedHat Special Course – “Become a Linux expert” (*AlphaBit’s Cells Program – ESI-SBA*) 2020 – 2021

## TECHNICAL STRENGTHS

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### **Programming Languages**

Python, Golang, Bash, AWK, Elisp

### **OS**

Linux (Red Hat, Ubuntu, Debian, Arch), BSD servers

### **Virtualization**

KVM & QEMU, Proxmox

### **Monitoring**

Prometheus, Grafana, Zabbix

### **Databases**

MySQL, PostgreSQL, MongoDB

### **DevOps**

Ansible, Kubernetes, Packer, Terraform, Podman, Docker, Docker Compose, Vagrant, GitLab

### **Tools**

Git, Vim, Emacs, Tmux, Zsh

## CERTIFICATION

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RedHat Certified System Administrator (*RHCSA*)

*June 2019*

Juniper Networks Certified Associate (Cloud) (*JNCA*)

*Oct 2019*

Cisco Certified Network Associate (Routing and Switching) (*CCNA*)

*Feb 2020*

## **PERSONAL PROJECTS**

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[`kvmcli`](#): Wrapper for managing virtual machines in a KVM-based cluster. [`ZARS`](#): Auto-rice script using Ansible & shell script for dwm, `st`, and personal dotfiles. [`bacli`](#): A lightweight application for automating backup and restore operations for various databases. [`homelab`](#): Personal homelab for Kubernetes and other infrastructure services. [`org-master`](#): org-mode/Emacs configuration for technical workflows and thesis work.

## **LANGUAGES**

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Arabic (Native), French, English