



AuroralQ

Cloud made easy

PFE Book
2025-2026



Who are we?

- AuroralQ is a consulting and cloud engineering company specialized in:
 - Cloud transformation & open-source infrastructure
 - Private, hybrid & sovereign cloud deployments
 - Application Modernization & DevOps Automation



Our mission

- Provide cloud solutions that are:
 - **Simple** – reducing complexity through automation
 - **Flexible** – powered by open-source & modular architectures
 - **Sovereign** – full control, no foreign jurisdiction risks
 - **Cost-Effective** – optimized workloads, no licensing fees



Why Open-Source?

96.3%

of the world's top 1 million servers run Linux

100%

of supercomputers run Linux

90%

of all cloud workloads run on Linux / OSS-based systems



Why Open-Source?

- Cost Efficiency & No Vendor Lock-In
- Security Through Transparency
- Innovation at Scale
- Talent & Community
- Sovereignty & Full Control



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Our Services

Cloud Platform Deployment



We master the full open-source cloud ecosystem:

- OpenStack (Compute, Neutron, Cinder, Keystone, Octavia...)
- Kubernetes (Charmed K8s, kubeadm, MicroK8s)
- Ceph Storage (object, block, CephFS)
- MicroCloud (simplified cloud for edge/regional deployments)
- LXD Containers & VMs



Infrastructure Automation

We automate infrastructure to ensure consistency, reliability, and speed:

- Terraform, MAAS (infrastructure as code)
- Ansible (configuration automation)
- Juju (model-driven automation)
- CI/CD pipelines (GitHub Actions, GitLab CI, Jenkins)
- GitOps workflows

Application Deployment & Modernization

We support full application lifecycle:

- Packaging apps into containers
- Setting up registries, pipelines, artifact management
- Deploying microservices architectures
- Implementing autoscaling, load balancing
- Integrating logs, metrics, tracing
- Securing CI/CD pipelines



Training & Upskilling

We deliver applied, hands-on training:

- Kubernetes fundamentals & advanced
- OpenStack administration
- Terraform & Ansible automation
- DevOps practices
- Cloud architecture
- Workshops for IT teams migrating to cloud



Public Cloud Platform

AuroralQ is building a **public cloud platform** that's **flexible**, **easy to use**, and **fully sovereign** – helping *IT teams lower costs and keep their applications running reliably and scale effortlessly.*



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Capstones



Capstone 1: CRM As A Service

Description

Design and build a cloud-native, multi-tenant CRM delivered as a managed service on the AuroralQ public cloud. The platform uses a microservices-based SaaS architecture with scalable backend services, secure integrations, and full observability, enabling organizations to manage customers and sales workflows without handling infrastructure.

Used Technologies

PHP, MySQL, Docker, Kubernetes, Helm, Keycloak, Prometheus, Grafana, ELK Stack, GitHub, GitLab, CI/CD pipelines, Terraform, Ansible



Capstone 2: Zero Touch Infrastructure

Description

This capstone focuses on designing and implementing a software-defined infrastructure platform enhanced with AI, deployed on the AuroraIQ public cloud. The system abstracts compute, storage, and networking resources and exposes them through APIs and declarative configurations. An AI component analyzes infrastructure telemetry (metrics, logs, events) to provide intelligent provisioning, anomaly detection, and optimization recommendations, demonstrating how cloud operations can evolve toward autonomous and self-optimizing systems.

Used Technologies

OpenStack, Neutron, Kubernetes, Docker, Terraform, REST APIs, Prometheus, ELK / Loki, RabbitMQ, PyTorch, n8n



Capstone 3: Kubernetes As A service

Description

This capstone focuses on designing and delivering a fully managed Kubernetes as a Service (KaaS) platform on the AuroralQ public cloud. The solution automates cluster provisioning, scaling, upgrades, networking, and security, allowing developers to deploy and operate applications without managing Kubernetes infrastructure.

Used Technologies

Kubernetes, Docker, Containerd, Helm, Terraform, GitLab, Prometheus, Grafana, Loki, CNI (Calico or Cilium), CSI Drivers, Vault



Capstone 4: Firewall As A service

Description

Design and build a cloud-native Firewall as a Service integrated into the AuroraQ public cloud networking layer. The platform provides centralized, API-driven security policies for traffic filtering, isolation, and auditing across tenants and applications.

Used Technologies

OpenStack Neutron, Kubernetes, Cilium, eBPF, Linux iptables/nftables, REST APIs, Python, Keycloak, Prometheus, Grafana, ELK Stack, Terraform



How to apply?

Send us a resume: amina.mseddi@auroraiq.cloud

Thank you

Together, let's build the future of cloud computing.