EMANUELE CASSESE

Platform Engineer · Kubernetes on Cloud & On-Prem

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PROFILE

AI Platform Engineer with 4+ years of experience designing, building and operating Kubernetes infrastructure on-prem and in the cloud. I run a GPU platform (NVIDIA H100 and L40S) that serves AI models to about 1,000 internal users and to customers via API, and a fleet of ~600 K3s clusters delivering managed services to ~600 customers worldwide, alongside managed Kubernetes for ~20 customers. CNCF Kubestronaut and NVIDIA-certified in AI infrastructure and operations.

SKILLS

Kubernetes & platform: Kubernetes, K3s, Rancher, Cluster API, vCluster, Cilium, CloudNativePG (CNPG)
AI infrastructure: NVIDIA GPU Operator, HAMi (GPU slicing), vLLM, KServe, LocalAI, LiteLLM
GitOps & automation: Argo, GitLab CI/CD, Ansible / Ansible Tower
Observability: Prometheus, Grafana, Nagios
Security & secrets: RBAC, Network Policies, SCC, HashiCorp Vault, External Secrets
Infrastructure: Proxmox, bare metal, AWS (EKS), Azure (AKS), Ubuntu, CentOS
Data & messaging: PostgreSQL, MariaDB, MongoDB, RabbitMQ
Scripting: Python, Bash, Golang, PowerShell

WORK EXPERIENCE

Platform Engineer
01/2024 - Present

Elmec Informatica S.p.A. - Brunello, Varese

- Design, build and operate the managed Kubernetes service for ~20 customers, provisioned with Cluster API on Proxmox, from cluster creation to application delivery, with the largest environments at 3 clusters of 50 workers each
- Operate ~600 K3s clusters (1-2 per customer, from single-node up) delivering managed services to ~600 customers worldwide, provisioned with Ansible on VMs and bare metal
- Run an on-prem GPU platform (NVIDIA H100 and L40S) built on the NVIDIA GPU Operator, using HAMi to slice GPUs across the cluster
- Serve AI models, from text-to-speech to embedding, with vLLM, KServe and LocalAI, changing models frequently as needs evolve
- Expose the platform through LiteLLM as a single API gateway for ~1,000 internal users and some customers, also routing requests to cloud models (OpenAI, Claude)
- Manage all cluster operators and the full stack from scratch to application deployment, using Argo and GitLab CI/CD
- Apply security best practices: RBAC, Network Policies and SCC, with secrets handled through Vault and External Secrets

Automation & Cloud Specialist
03/2022 - 01/2024

Elmec Informatica S.p.A. - Brunello, Varese

- Operated Kubernetes clusters across all customer environments and, as part of the operations team, managed and monitored ~60 application databases running on CloudNativePG (CNPG) on Kubernetes
- Developed Nagios monitoring plugins running on hundreds of thousands of hosts across customers
- Administered CentOS and Ubuntu Linux systems and database operations (MongoDB, MariaDB, PostgreSQL)
- Automated operations with Ansible Tower, Python, Bash, Golang and PowerShell
- Managed team services following the ITIL framework

Commissioning Engineer
10/2019 - 12/2020

Fives Intralogistics S.p.A. - Lonate Pozzolo, Varese

- Commissioned machines on site through parameterization and hardware testing, including software setup on on-site PCs
- Provided production support for hardware issues at the customer’s site

EDUCATION

IT Technical Diploma - Grade 84/100
Istituto Statale di Istruzione Superiore "Andrea Ponti" — Gallarate, Italy (06/2019)

CERTIFICATIONS — CNCF KUBESTRONAUT

All five CNCF-recognized Kubernetes certifications (official Kubestronaut title), plus NVIDIA AI infrastructure certification.

CKA	Certified Kubernetes Administrator	*CNCF*
CKAD	Certified Kubernetes Application Developer	*CNCF*
CKS	Certified Kubernetes Security Specialist	*CNCF*
KCNA	Kubernetes and Cloud Native Associate	*CNCF*
KCSA	Kubernetes and Cloud Native Security Associate	*CNCF*
NCA-AIIO	NVIDIA-Certified Associate: AI Infrastructure and Operations	*NVIDIA*

Other courses: Ansible Advanced (Udemy) · Python (Udemy) · AWS for Cloud infrastructure management
Badges & verification: credly.com/users/emanuele-cassese

LANGUAGES

Italian - Native
English - B2