

Jean-Sébastien Loiseau

Infrastructure and Systems Engineer · Virtualization · Automation · Self-Hosted Platforms

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Infrastructure engineer focused on virtualization and systems administration: design, deployment and operation of self-hosted platforms at scale, infrastructure-as-code automation, security embedded in operations.

PROFESSIONAL EXPERIENCE

Infrastructure and Systems Engineer · Univ. of Reims Champagne-Ardenne (URCA)

Sept. 2025 – present

Lab-I* · France 2030 / ANR project "CMA Fo6Med" (ANR-23-CMAS-0008)

- Co-supervise students designing and deploying the pedagogical hospital information system of the Fo6Med project (physical, redundant: HIS, services, monitoring, security operations); validate and correct its network and system architecture.
- Lead the restructuring of the department's server infrastructure: Proxmox cluster (critical workloads), virtualized Cisco DNA Center; server migrations and hardware sizing (Fo6Med and RemoteLabz).
- Maintain the external network infrastructure of RemoteLabz; design hands-on labs and network mockups, and write user/admin documentation for the HIS (security, systems administration; Bachelor's to Master's).
- Co-author (alphabetical order) of *RemoteLabz: A Platform to Teach Computer Science and Security*, CSEDU 2026 (peer-reviewed).

Cloud Engineer · Work-study (M.Sc. year) · Univ. of Strasbourg

Sept. 2024 – Sept. 2025

- Finalized an Ansible solution for automated deployment of virtualized OpenStack; OIDC Keycloak integration; per-project Grafana dashboard automation.

Internship · Cloud Infrastructure · Univ. of Strasbourg

Mar. – Jun. 2024

- Built an Ansible solution to automatically deploy a virtualized OpenStack instance (standard and standalone) with its networks and devices.

Internship · Systems & Network Administration · URCA

Apr. – Jul. 2023

- Automated deployment of 100+ workstations (Fog Project), AD-joined dual-boot images; NetBox IPAM; VMware vSphere/vCenter administration.

OPEN-SOURCE / DEVELOPMENT PROJECTS

- **Traefik Manager** · centralized management of multi-instance Traefik deployments; declarative config generation, RBAC + Keycloak SSO, CI/CD. Node/TypeScript + React. Deployed.
- **Nautilus** · multi-host Docker management; outbound agent with no exposed ports, mutual ECDSA P-256 authentication. MIT license. Deployed.
- **Nexus** · server-fleet management (Go agent + Node/Fastify); end-to-end encrypted channel, watchdog-revert anti-lockout (firewall/netplan), PROBE/AGENT model. Structured hardening, in final remediation before open-sourcing.

PERSONAL INFRASTRUCTURE (HOMELAB)

- Self-hosted platform (Dell R740xd): Proxmox VE, 6-VLAN segmented network, OPNsense firewall, multi-tier ZFS storage, Traefik v3 + Keycloak SSO, Netbird mesh VPN, PBS backups.
- Observability as code: Prometheus, Grafana, Loki/Alertmanager; monitoring of hardware (iDRAC/SNMP), hypervisor, OS, containers and applications.

EDUCATION

M.Sc. Networks & Telecommunications · Network Administration & Security

URCA, 2025

B.Sc. Computer Science

URCA, 2019 – 2023

TECHNICAL SKILLS

Virtualization / containers : Proxmox PVE/PBS, VMware vSphere, QEMU/KVM, Docker, LXC, OpenStack

Automation & networking : Ansible, GitLab CI/CD, pfSense/OPNsense, VLAN/OVS, VPN, Keycloak/OIDC

Monitoring & systems : Prometheus, Grafana, Loki, SNMP; Ubuntu, Debian, RHEL, Windows Server

Development : Python, Go, Node/TypeScript, React, SQL/PostgreSQL

Certifications : AWS Academy Graduate (Cloud Architecting & Foundations, 2024); Cisco CCNA Introduction to Networks (Verified, 2023); CCNP Core Networking (Verified, 2025)

Languages : French native; English B2 (professional working proficiency)