

# Johan Fleury | System administrator

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## Work experience

### Eidos Montréal / Square Enix

*System administrator*

**Montréal (Canada)**

*Since November 2018*

Design and deployment of Kubernetes infrastructures to host game servers and Machine Learning experiments.

- Management of Kubernetes clusters hosting all kind of applications from stateless web services to Machine Learning workloads through Game Servers.
- Strong emphasis put on scaling and automation capabilities using Horizontal Pod Autoscaler, Cluster Autoscaler, nginx as ingress controller and cert-manager with Let's Encrypt for certificate management.
- Extensive use of Terraform to deploy clusters on GCP and AWS. Rewrite of the monolithic Terraform code base to a modular one using Terragrunt.
- Implementation of GitLab-CI pipelines to build and deploy Machine Learning experiments and integration of Flux to manage Kubernetes configurations in Git.

### OVH

*System administrator*

**Montréal (Canada)**

*August 2016 – November 2018*

System administrator on shared web hosting and Database as Service infrastructures, managing 10,000 physical servers hosting over 3 million web sites.

- Complete rework of the Puppet code base, moving a 10 years old code base to state of the art using the “roles and profiles” pattern along with Puppet forge modules and home made providers.
- Design and deployment of a new load balanced, highly available, feature-full Puppet infrastructure (with PuppetDB, Hieria 5, r10k) supporting 20 simultaneous agent run per minutes.
- Development of Python tools and libraries to avoid code redundancy and ease self-healing and monitoring of the infrastructure and services.

### TRINAPS

*System administrator*

**Belfort (France)**

*February 2012 – July 2016*

System administrator and IT support technician in a human-scale ISP.

- Management and rethinking of virtualization infrastructures based on Proxmox VE with Netgear and Synology datastores hosting hundreds of virtual machines.
- Network and systems management automation through Ansible, Puppet and in-house tools.
- Network devices setup and management for customers and internal needs such as Cisco switches and routers and Juniper firewalls.
- Deployment of network and telecom devices in customer premises (routers, switches, VoIP phones, Wireless access points) and post-installation customer support.

## Qualifications

**2011:** Two-year university degree in computer science, *Belfort-Montbéliard IUT (France)*

**2009:** High-School Diploma in electrical engineering *Jean-Jacques Henner High-School, Altkirch (France)*.

## Skills

**Languages:** Python (with Django or Flask for web services), Bash.

**Infrastructures:** Kubernetes, Proxmox, VMWare.

**Network:** OpenVPN, Open vSwitch, Basics in JunOS and RouterOS.

**Others:** Puppet, Docker (and docker-compose), Terraform.

**Operating Systems:** Daily use of GNU/Linux (Debian) and Microsoft Windows.

## Personal projects

### *Personal infrastructure*

Management of a personal infrastructure with the aim of discovering new tools and software and staying up to date with industry standards.

**Web:** HAProxy is used as frontend load balancer in front of 2 Apache web servers. Certificates are managed with Let's Encrypt.

**Databases:** PostgreSQL is the main DBMS and MariaDB is used when necessary.

**Emails:** Postfix, Dovecot, Spamassassin

**DNS:** DNS resolvers run Unbound with DNS over TLS and Knot is used as authoritative name server with automatic DNSSEC management (with DANE and SSHFP).

**Monitoring:** Downtimes are kept as low as possible with tools such as InfluxDB, Telegraf and Grafana for white box monitoring and observability. Icinga 2 is also used for black box monitoring of user facing services.

**Management:** Deployments are automated using Puppet which manages more than 6,000 resources. Net-Box is used as the source of truth for inventory and IP address management.

**Network:** Servers are connected through a dual stack (IPv6 first) network routed using OSPF and BGP using Mikrotik, Juniper and Cisco devices.

### *GLaNET*

GLaNET is a partial mesh network run by a few network enthusiasts and which goal is to replicate at a smaller level how Internet networks are connected together. See: <https://glanet.org/>

### *Free software*

**GitHub:** <https://github.com/johanfleury/>

**GitLab:** <https://gitlab.com/Arcaik>

## Langues

**French:** Native speaker

**English:** Intermediate level