Clem HERTLING

✉ clem.hertling@wxcafe.net
🌐 wxcafe.net

Work Experience

2022-2024 **Transit Data Engineer**, *MBTA Customer Technology Department*, NYC

2 years, Data Management and Python Development.

Tools Used: Python, Poetry, Pandas, Elixir, HASTUS, Terraform, Github Actions, AWS S3, . . .

Management of the GTFS feed for the entire MBTA transit system, including communication with transit partners (Keolis, Google, Apple, etc) and internal teams from varied backgrounds

Improvements to internal systems performance, including optimizing Pandas code and refactoring the codebase

Regular day-to-day integration of service disruptions into software systems (using Python and Pandas) producing GTFS data

Adjustment work on other software systems, including real time train & bus tracking, public-facing displays, etc

100% remote workplace for the entire work period

2017-2022 **Systems and Network Engineer**, *Gandi.net*, Paris / NYC

5 years, Network engineering and Systems administration.

Tools Used: Ansible, Puppet, Packet Journey, IOS/IOS-XR, JunOS, PfSense, Quagga, RIPE Atlas, RT and Phabricator, . . .

Migration of production from an older datacenter to four newly-spawned ones: backend change, automation of the migration (ansible), live-migration of clients with 0 interruption, network spawn from scratch, etc . . .

Running day-to-day production on Gandi's network (oncall, tickets) from offices to transit and peering management

Participation in the planification of the new Luxembourg PoP architecture, including equipement replacement, architecture switch, complete redundancy, automation of the public and corp migration, . . .

Setup of multiple anycasted DNS "nanoPoPs" (Japan, East US) with network architecture design, configuration of the equipments, and follow-up from reception of the equipment all the way to production.

Setup and use of RIPE Atlas: installation of Anchors, use of measurements for alerting / performance statistics

Regular day-to-day management of incidents with registries and hosting infrastructure

100% remote workplace with 6 hours time difference, since november 2018.

2016–2017 **Intern, then Systems and Network Engineer**, *FranceIX Services*, Paris

1.5 year, Administration of the whole infrastructure.

Tools Used: Ansible, Elasticsearch/Logstash/Kibana, OpenVPN, OpenBSD, Postfix, Exim4, Tacacs+, Elastalert, Gitlab & Gitlab CI, Duplicity, Bash on Windows, Python & Ruby scripting, Brocade SLX-OS, . . .

Development of new services (Network equipment configuration backups, log centralization with ELK, VPN setup upgrade, email smarthost, sbackups, lab automation, internal git forge, CI and tests, . . .).

Work on improving the security of the infrastructure (deployment of AAA, User separation and automation, . . .).

Minor work on backbone upgrade

Minor work in datacenters, day-to-day support to end users

2015 **Intern**, *Paris Mutuel Computing*, St-Maur des Fossés (near Paris)

2 months, Systems Integration

Tools Used: bash, debootstrap, C, debian packaging tools, perl, perldoc, svn, . . .

Development of a software tool for the generation of system images for embedded platforms (Raspberry Pi 2, other ARM boards), including integration of domain-specific software in the system images, and development of a web-based management platform for the resulting system, in Perl

Associations and Open-Source

2017- **Collaborator**, *Mastodon*

Tools Used: Puppet, Qemu/KVM, Nginx (reverse proxy/load balancer), Ruby (Rails), Javascript, . . .

(Mastodon is a decentralized and federated social media platform, resembling Twitter)

Running multiple instances with over a thousand users since April 2017.

Regular work on the issue tracker of the project, triaging bugs and requests, answering questions.

Submitted a few patches, maintaining (small) forks for personal use

2013–2017 **Organizer and Speaker**, *Cryptoparties*

Tools Used: LaTeX, GPG, Tor, secure communication tools (Signal), TAILS, . . .

("Cryptoparties" are social events where people can learn about privacy and technology)

Organization and/or participation to multiple cryptoparties in Paris, including documentation, amenities (Internet access, stickers, TAILS USB sticks, PGP key slips, . . .), and opening talks

Multiple other planned cryptoparties over 2017/2018

2013–2016 **Systems Administration Team Member**, *Association Nos-oignons*

    Tools Used: Debian, Prosody, Postfix/Dovecot, Schleuder, Ikiwiki, Mailman, Tor, . . .
    (Nos-Oignons is an association for the promotion and deployment of privacy tools in France)
    Work on the initial setup of the association (first node setup, email, XMPP, ...)
    Implementation of the following node deployments

2013–2017 **Speaker and Member**, *Association Gconfs (Epita)*

    Tools Used: LATEX, Pitivi, Open Broadcasting Software (OBS), pandoc, . . .
    (Gconfs is a student org at Epita (a CS Engineering school) that centers on organizing/giving conferences)
    Speaker in multiple talks, generally centered about Linux/UNIX and Networks
    Work on EuroBSDCon 2017 audio and video setup, streaming and recording
    Speaker for several short talks during the end of 2017

Education

2020 **RIPE NCC Certified Professional IPv6 Analyst**

2016–2017 **Licence Professionnelle MRIT (Security major)**, *Université Paris-Est Créteil*, Vitry-sur-Seine, *Networks/Telecom Bachelor's Degree*

2014–2016 **DUT Réseaux & Télécoms**, *Université Paris-Est Créteil*, Vitry-sur-Seine, *Networks/Telecom*

2013–2014 **Infosup**, *Epita*, Villejuif, *Computer Science*

2013 **Baccalauréat Scientifique**, *High School Diploma*

Skills

English	Fluent
French	Native speaker

Programming

shell	daily use
C/C++	basic knowledge
Rust	basic knowledge, learning
python	regular use
pandas	regular use
perl	infrequent use for scripting

Systems/Networks Administration

Linux	Administration of Debian/Ubuntu/Fedora/RHEL in production, Archlinux on desktop machines, LFS
BSD	Frequent administration of OpenBSD and FreeBSD
macOS	Daily use, general knowledge of the internal workings
Virtualization	Xen, Docker, Qemu/KVM, FreeBSD Jails
Automation	Puppet, Ansible, Terraform
Software	Nginx, Postfix, Apache, Dovecot, git, OpenSMTPd, ZFS, Mastodon, . . .
Monitoring	Nagios, LibreNMS/Observium, Prometheus/Grafana, ELK stack
Network	CCNA 1–4, Use of IOS/IOS-XR, JunOS

Extras

Interests

Photography, *Film (medium / large format), Instant, and some Digital (Fuji)*

Electronics, *Repairing and tinkering with electronic devices*

Rock Climbing, *Frequent practice at local gym as an amateur*